

TOWN OF CORTE MADERA GENERAL PLAN

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May 7, 1985

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Joseph P. Guzzetta, Town Manager

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*Amended January 3, 1978.

BACKGROUND TO THE PROGRAM

In 1963, the Town of Corte Madera General Plan was thoroughly revised. Since then, however, major changes have taken place in public attitudes and legal requirements. The concern for the natural environment, for example, is more pronounced now, as is the desire to de-emphasize the use of the private automobile. In addition, the State Legislature has mandated that nine specific elements must be included in all general plans. Overall, then, some of the most basic assumptions of the 1963 plan have been altered and the form of the earlier plan has been rendered obsolete.

In the fall of 1972, as a response to the need for a new plan, the Town's Mayor appointed 42 residents to assist in the preparation of a new Corte Madera General Plan. Those residents, including members of the Town Council and the Planning Commission, worked with the consultant for a year to assess local problems and values, to establish community goals, and to formulate policies and programs to achieve the goals they had established. Organizationally, five citizen committees were formed to deal in depth with housing, community services, open space, transportation, and community appearance. In large measure then, this document is the result of the work of those citizens.

A decision that was required early in the study concerned the actual area of study. Due to the importance of the Tiburon Peninsula Ridge and on increasing pressure for development adjacent to Corte Madera, the planning area used in the General Plan, shown in Figure 1-1 extends beyond the corporate limits of the Town. The major portion of this unincorporated land is composed of the Tiburon Peninsula Ridge which acts as an open space "separator" between Corte Madera and Tiburon. Currently under the county's jurisdiction, the ridge is crucial to the Town because of its significant visual importance and potential impact on public service facilities and, to a lesser but important extent, because of its considerable recreational potential. Unincorporated areas west of U.S. 101 have been included in the planning areas because of recent development proposals or development activity. Three specific sites included are: a housing development south of the railroad right-of-way and west of Tamal Vista Boulevard; a partially developed area west of Meadowsweet Drive and east of the Quarry site; and a partially developed area southwest of Casa Buena Drive, between the Corte Madera and Mill Valley corporate limits.

A great many plans and planning programs are being developed in the area surrounding Corte Madera. Because these programs are undertaken in incorporated areas, it is not appropriate to include them within the Town's planning area. For example, plans for the Northridge outside of Corte Madera, for portions of the railroad right-of-way in Larkspur and Mill Valley, and for the ferry terminal site and remainder of the San Quentin Peninsula will all have an effect on the quality of life in Corte Madera. It is essential, therefore, that all these communities work jointly and adopt policies which will be mutually beneficial.

EXISTING CONDITIONS

The Town of Corte Madera lies in the southeast portion of Marin County, about eight miles north of the Golden Gate Bridge. It is the approximate center of the more heavily populated southern portion of the county, with Mill Valley, Sausalito and Tiburon to the south and Larkspur, Greenbrae, San Anselmo and San Rafael to the north. Regionally, the Town is served by U.S. 101 which bisects Corte Madera and creates an "east and "west" side. Figure 1-2 shows the location of the Town in the San Francisco Bay Area.

In some ways the Town itself can be characterized by a review of existing socio-economic, land use and circulation conditions. These factors are important in developing a framework for the Corte Madera General Plan in that they provide a basis for policy decisions; that is, the review of this data provides an opportunity to view the current situation and thereby determine what kinds of changes are necessary and desired. In addition, to this data, a review of public plans and programs in adjacent communities is also important since these programs could have a significant effect on planning decisions within Corte Madera.

SOCIO-ECONOMIC CHARACTERISTICS. Important socio-economic characteristics considered within the study include local population composition, income, employment and mobility. Information on these factors was derived from the 1970 U.S. Consus and can be found in the Technical Appendix. Since the population increase in Corte Madera over the past five years has been small, most of the 1970 figures are probably fairly accurate. However, improvements in the Golden Gate Bridge Highway and Transportation District's ferry and bus system may have resulted in some modification in the travel behavior of residents, particularly in the commute to downtown San Francisco.

POPULATION. In April of 1970, Corte Madera had a population of 9,421, equivalent to just under 4.5 percent of Marin County's population of 206,038. Age structure in Corte Madera generally parallels that of the County as a whole, and the Town's average family size is 3.29 compared to the County's 3.38. About 73 percent of the Town's residents live in areas west of U.S. 101, with the remainder living in the newer areas to the east. The 1970 census data indicates that racially, the Town is 97 percent white, compared to 95 percent for the county.

INCOME. About 90 percent of all Corte Madera residents are reported living in what the consus terms "family households". A review of 1970 income characteristics of these family households indicates a median income of \$14,100. However, this figure generally termed "moderate", has increased over the past three years due to inflation and has severely limited availability of adequate family housing in most of Marin for new residents earning less than \$15,000. It is significant to note that the median income differed considerably east and west of the freeway: in the east, median income was \$15,797, \$1,766 higher than that for the families living in the west of U.S. 101. By comparison, the entire county had a 1970 median income of \$13,935. Appendix Table 1-2 indicates the 1970 income distribution for the approximately 2,500 family households in Corte Madera.

EMPLOYMENT. In April of 1970, Corte Madera had a civilian labor force of 4,031 persons, of which slightly less than six percent (232 persons) were unemployed. Of the employed residents, 36 percent were women. As shown in Appendix Table 1-4 which indicates the number of people employed in various industrial categories, the wholesale and retail trades employed most of the Town's labor force, equal to 22 percent. Overall, 72 percent of employed residents worked for private individuals or enterprises as salary or wage workers, 10 percent were self-employed, and 18 percent worked in government occupations, including the school districts. Appendix Table C1 shows that less than 36 percent of workers were employed in Marin County and that the overwhelming majority - nearly 50 percent - commuted to San Francisco.

LAND USE. Corte Madera is a town in which the predominant land use is single-family detached homes in well-defined, landscaped neighborhoods. The older portions of the Town west of the freeway are built largely on sloping hillsides that reach elevations of 1,000 feet. This area is wooded with oak, eucalyptus and redwood and includes a dense understory growth. Over time, some of the natural underbrush has been replaced with a wide variety of native and exotic vegetation. In the area east of the freeway, 87 percent of the housing was built since 1950, and 40 percent of this number was constructed since 1965. These newer areas have been built primarily on lowlands and tidelands over filled ground, although some development has begun on slopes which form part of the Tiburon Peninsula Ridge. These slopes are now open and grassy, with some brush and scattered trees, while the remainder of the vegetation in the wetland areas is limited primarily to aquatic grasses.

In addition to single-family homes, about 25 percent of the total housing supply is comprised of multi-family residential units. In addition, there are areas of commercial and industrial development near the freeway as well as schools, parks and open space areas. Figure 1-3 shows the existing general land use pattern in the Corte Madera planning area.

NATURAL FACTOR. Much of the vacant land shown on Figure 1-3 "Land Use, 1973", may initially appear to have a high potential for development. However, many of these areas also exhibit development constraints and/or significant scenic, recreation or natural habitat values. The presence of either or both of these factors eliminates or substantially reduces the ability of the land to withstand development because of the likelihood of incurring harm to life and property or altering high-value elements of the natural environment. There is a strong feeling among residents to maintain the scenic open and natural character of the Town by publicly acquiring and preserving as many of these open spaces as possible. Some of the lands, particularly the marshes and wetlands along the Bay shoreline, have high natural habitat value and, local citizens are joined by several conservation organizations and public regional agencies (BCDC, for example) in seeking their preservation.

CIRCULATION AND MOBILITY. Most Corte Madera residents rely on the private automobile for shopping and commuting purposes, although the area is served by local and express buses operated by the Golden Gate Bridge District. Nearly half of all commuters worked in San Francisco in April 1970, and of these, 789 persons (20.8 percent of all commuters), worked in the San Francisco central business district. Nearly half of all Corte Madera households reported that they had two or more cars available to them.

The main route through the Town is U.S. 101 which is also the principal freeway running north-south through Marin County from Sonoma County on the north to San Francisco on the South. The major freeway interchange serving the Town is located at Tamalpais Drive. However, the clover-leaf design and its proximity to the Madera Boulevard exit and entrance for southbound traffic have resulted in dangerous weaving conditions on the freeway. Pedestrian access from east to west across the freeway is essentially absent, although use of Tamalpais Drive is sometimes made even though it is extremely dangerous. Since many of the community services - including the library, Town Park, Town Hall and the Police and Fire Departments - are located west of the freeway, a significant number of residents living in the eastern portion of the Town feel there is an inadequate distribution of Town Services.

Several other major roads are in the area. Corte Madera Avenue runs north-south through the hills and connects Corte Madera with Larkspur and Sir Francis Drake Boulevard to the north and with Mill Valley to the south. Paradise Drive is the major arterial serving residents east of the freeway and goes east then south around the Tiburon Peninsula. All access roads to housing developments are reached from Paradise Drive.

Pedestrian and bicycle access throughout Town is for the most part inadequate, with few areas where bicyclists can ride safely away from vehicular traffic. Although the Northwestern Pacific Railroad right-of-way runs through the Town both east and west of the freeway, most of it has been abandoned and not put to any other use except for a small portion used to widen San Clemente Drive.

REGIONAL PLANNING STUDIES

Since 1963, when the last Corte Madera General Plan was adopted, several major regional studies have been prepared. The major policies contained in these plans which could affect Corte Madera are described below.

MARIN COUNTY-WIDE PLAN. Corte Madera has been designated as a portion of the residentially developed corridor extending along the southeast portion of Marin County in both the Association of Bay Area Governments (ABAG) "Regional Plan 1970-1990" and in the new "Marin County-Wide Plan". Each of these plans also specifies the Corte Madera area as a community activity center for regional commercial facilities.

The "Marin County-Wide Plan" contains three major goals which will strongly influence the Corte Madera General Plan. They are:

1. Discourage rapid or disruptive population growth but encourage social and economic diversity across the county and within the neighborhoods.

The major aim of this goal is to limit growth to about 2,000 new dwelling units per year. This would result in a maximum county-wide population of 260,000 by 1980, an increase of more than 50,000 persons over 1970. The 1970 income mix for the county was 20 percent "low" (under \$8,000/year), 47 percent "middle" (\$8,000 to 15,000/year), and 33 percent "high" (\$15,000 + year). The Plan proposes that this mix remain constant by providing housing appropriate for these income ranges. Intricately involved in this aim is the need to institute property tax relief for some residents in order to curtail the exodus of low and middle income families from the county.

2. Achieve greater economic balance for Marin by increasing the number of jobs for residents and by adding to the supply of housing for some of the people who now commute into Marin to work but who would like to live here.

In 1970, approximately 47.5 percent of Marin's employed residents worked outside the county. In the southeast portion of the county where Corte Madera is located, the percentage was more than one and one half times as high. Because there is so little local employment at present, residences

account for 77 percent of the local property tax base. Therefore, the aim here is to encourage the creation of new jobs for all income ranges within the county-wide centers at Corte Madera, Larkspur, San Rafael, Northgate and Novato. A main assumption is that many present residents will find new employment closer to their homes and new residents will move to and work in Marin. The result will be a diversification of the local economy and a reduction in the amount of commuter miles driven. Interrelated with Goal 1, new housing will have to be developed for the increase in low and moderate income workers.

3. Keep the quality of the natural environment high, and achieve high quality in what is built, through a balanced system of transportation, open space and land use.

This goal encompasses several proposals including the upgrading of U.S. 101 to an eight-lane freeway from the Golden Gate Bridge to Route 37, reducing automobile traffic by developing a complete transit system with the main-line facilities integrated with the U.S. 101 right-of-way, establishing a county-wide bicycle path system serving all communities and recreation areas, creating a unified system of open spaces and parks with the acquisition of Bay shoreline and the ridges separating communities with the earliest and highest priority for action and finally, higher density housing (12-20 dwelling units/acre) built near the county-wide centers in combination with the proposed increase in commercial activities. The latter also proposes the encouragement of some family-size units in all new apartment developments.

SAN FRANCISCO BAY PLAN. The San Francisco Bay Conservation and Development Commission (BCDC) has jurisdiction 100-feet inland from the Bay and, therefore, within the Corte Madera Bayfront. "Bay" is defined to include marshlands, tidelands and submerged lands - that is, land lying between mean high tide and five feet above mean sea level, lying between mean high tide and mean low tide, and lying below mean low tide respectively. But "Bay" excludes those lands not subject to tidal action. The BCDC plan recognizes that there is high value water bird habitat in Corte Madera and therefore recommends: the development of a shoreline park within those lands presently diked but not developed; the maintenance of existing tidal marsh; the provision and protection of public access to shellfish areas offshore; and a proposed launching ramp for pleasure boats and a marina near the mouth of Corte Madera Creek.

MARIN COUNTY REGIONAL PARK AND OPEN SPACE DISTRICT. The primary purpose of this newly formed district will be to acquire open space throughout the county. Acquisition priorities will be based upon a series of criteria including the preservation of scarce natural habitats, the preservation of ridges which act as natural community separators, and the degree to which an open space is vulnerable to development. In order to guide the district in its acquisition program, it will be necessary for the Town of Corte Madera both to indicate which lands they feel should be

preserved for county-wide benefits and to establish the relative priority for acquisition. This is especially important since the district policy requires that land to be preserved must be identified in the Open Space Element of the "Marin County-wide Plan" or in other specific and general plans. The latter, therefore, would include the Corte Madera General Plan. It should be noted that the major portion of district funds will be used only for acquisition and related expenses; maintenance and operation of a county-wide facility will be the responsibility of the local jurisdiction.

GOLDEN GATE CORRIDOR TRANSPORTATION FACILITIES PLAN. This plan of the Golden Gate Bridge, Highway and Transportation District proposes rapid transit improvements for Marin County residents, with emphasis on maximizing commuter accessibility to downtown San Francisco. The plan contains five alternate route and system recommendations, all of which pass through Corte Madera. Current studies are concentrating on defining the exact alignment for the transit right-of-way as it travels through San Francisco, but subsequent studies will determine the final Marin County alignment as well. Therefore, it is important that the Town of Corte Madera makes firm recommendations for that portion of the transit route that passes through the Town.

ADJACENT COMMUNITY PLANNING STUDIES

The Cities of Tiburon, Mill Valley and Larkspur, as well as several nearby unincorporated areas have developed - or are now in the process of developing - plans which could have serious effects on Corte Madera. A brief discussion of each of these planning efforts is provided below.

TIBURON OPEN SPACE ELEMENT. This element, prepared for the City of Tiburon and released in October 1972, makes specific recommendations for open space preservation for Tiburon and its immediate surroundings. Included is an action proposal for the Tiburon Peninsula Ridge, portions of which are in the Corte Madera planning area. Specifically, the element recommends that all of the ridge area, from Tiburon to the Corte Madera Town limits, be preserved in permanent open space to protect the scenic amenities, vegetation, and habitat value of the ridge and to provide for recreational trail opportunities.

TIBURON TRAILS PLAN. The Phase 2 report of May 1970, makes recommendations for a continuous trail system through portions of the City of Tiburon, the unincorporated portions of the Tiburon Peninsula Ridge and into Corte Madera. The trail winds from Keil Cove in the southwest section of Tiburon, continues along the top of the ridge and eventually terminates in Corte Madera at U.S. 101. This proposed Tiburon Ridge trail is a crucial part of the overall county-wide trail system and an essential component of the plan to develop a continuous trail for hikers from the San Francisco Bay to the Pacific Ocean. The report also recommends that the Tiburon Ridge trail eventually be linked with new and existing trails west of the freeway by providing an overpass in Corte Madera. The "Tiburon Trails Plan" is important to Corte Madera since it makes recommendations for the use of lands within the local planning area as well as lands within the Town's corporate limits. Further, it sets a very specific aim for the future use of the ridgetop which implies a regional, rather than local, importance of these ridge lands for scenic preservation and recreational opportunities.

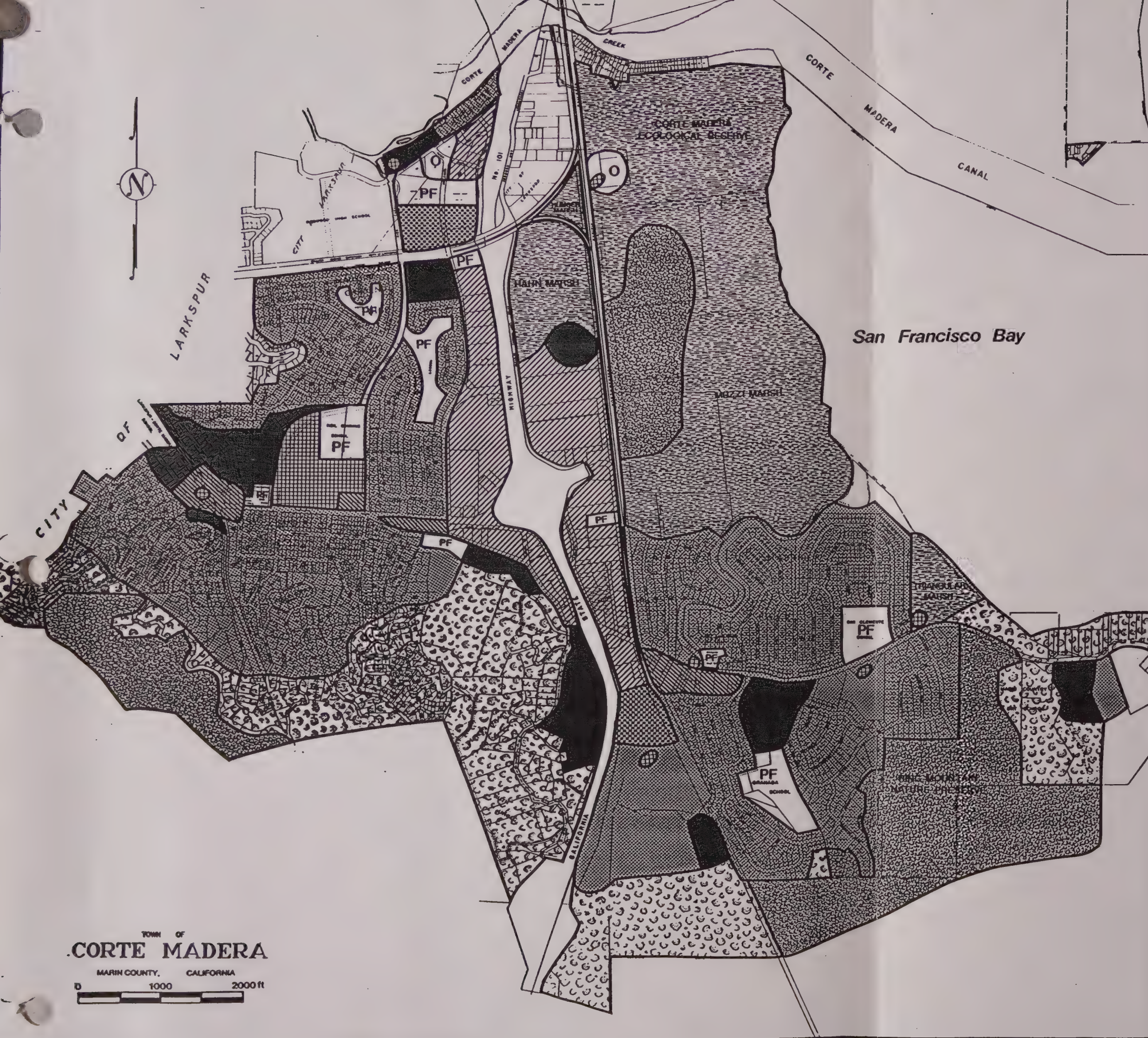
STRAWBERRY AREA PLAN. The Strawberry Area lies east of the freeway and south of Corte Madera. The northern open space lands, considered to be within the Strawberry planning area, are the same ridge areas also considered in the "Tiburon Open Space Element" and included in the Corte Madera planning area. The latest policy recommendations of the Strawberry Area Citizens Open Space Committee call for public acquisition with permanent open space of the ridge top areas with regulated development of the remainder of the lands. These would include provisions to permit development on lands that are free from significant geologic, topographic and seismic hazards, and which do not contain significant vegetation and wildlife habitat. All development, including roads, would be sited on the lower portions of the ridge in a manner which preserves a natural open space appearance. Stringent design controls would be exercised to insure that land forms and significant vegetation are not substantially altered and that the natural appearance of the overall area is retained.

NORTHRIDGE PLAN. This report, prepared in 1972 and paid for by the Marin Conservation League and the Marin County Parks and Recreation Department, is a preliminary open space plan that delineates 1,347 acres of ridgeland, hillsides and canyons to be preserved in the Northridge. The Northridge lies in Marin County (394 acres), Larkspur (363 acres), Mill Valley (494 acres) and Corte Madera (95 acres); most of the terrain has a slope of 30 percent or more. The prime purpose of the plan is to maintain the greenbelt, or divider, between cities as well as to maintain the important visual and natural appearance attributes of the site. Although the plan is not an official document, Marin County does have a policy to retain ridges in permanent open space, including the Northridge. There is still some question as to the exact boundaries of the Northridge and the method by which acquisition can be financed. Financing is of prime importance since the land is valued at more than \$3 million and is under four separate jurisdictions.

MILL VALLEY COMPREHENSIVE PLANNING PROGRAM. The City of Mill Valley has begun work on a comprehensive planning program which will result in a revised general plan to be completed in late 1975. A major part of the plan will address growth and conservation issues and, since Mill Valley and Corte Madera share common boundaries along the Northridge, it is important that the two cities develop compatible policies. A trail system between the cities which might utilize the abandoned railroad right-of-way for part of the network is also to be considered in the Mill Valley Plan.

LARKSPUR GENERAL PLAN REVISION. The City of Larkspur has revised their general plan and many of the recommendations will have a direct affect on Corte Madera, particularly in regard to use and development of the San Quentin Peninsula, the ferry terminal and the Northridge. In addition, the Larkspur plan recommendations for modifications in freeway design and the possibility of sharing municipal services and facilities with Corte Madera is of importance to the Town. While the future of the San Quentin State Penitentiary and the remainder of the peninsula is still indefinite, the Larkspur City Council adopted in late 1972, a general plan for the peninsula which calls for a combination of open space/recreation, large-scale apartment development, commercial facilities and motels. Whether this development will actually materialize as planned is uncertain, but any future expansion of facilities on the peninsula will, most likely, affect traffic circulation in Corte Madera, particularly along the freeway, and will have a significant visual impact on views of the area from many portions of the Town.

The Golden Gate Bridge, Highway and Transportation District has also selected a site on the southwestern portion of the peninsula as the location for the Larkspur ferry terminal. This terminal will serve boats to and from San Francisco and will expand the service now available from Tiburon and Sausalito.



LAND USE ELEMENT

Open Space

Marsh

Recreation

PF Public Facilities

Open Residential
(0 to 2 units/acre)

Medium-Density Residential
(2 to 6 units/acre)

High-Density Residential
(7 units or more/acre)

Local-Serving Commercial

Region-Serving Commercial

Industrial

O Office

June 1984

Sheryl Marioni
Sonoma State University

CHAPTER 2

GENERAL PLAN

ELEMENTS

LAND USE ELEMENT: POLICY FRAMEWORK AND PLAN SUMMARY

*Amended January 3, 1978

*Amended May 4, 1981

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LAND USE ELEMENT

POLICY FRAMEWORK AND PLAN SUMMARY

POLICY FRAMEWORK. The Corte Madera General Plan is designed to function best as a guide. It is a basis for decision-making that portrays the goals of the Town and indicates the steps necessary to achieve them. But a general plan is no stronger than the interest of a community. Use the Plan and it becomes a vital tool in helping shape and maintain the environment so precious to the Town. Ignore the Plan and it grows lifeless and valueless.

The Corte Madera General Plan identifies a series of aims basic to residents of the Town. Each of these aims provides a starting point for developing policies, programs and strategies. In turn, these recommendations become the guide for public and private actions. As identified, the broad aims of the Town of Corte Madera are:

Residents must be protected against dangers to life and property in areas where soils, geology, topography or other factors constitute a potential threat.

Residents must be protected against dangers to life and property in areas where seismic conditions constitute a potential threat.

Air, water, and noise pollution conditions should be mitigated to protect the health and safety of residents.

Corte Madera's natural resources must be conserved and maintained and their sound utilization promoted.

In both the local and regional setting, the small-town scale and character of Corte Madera should be preserved and enhanced.

A diversity of age groups and of social and economic backgrounds among residents should be promoted.

Existing neighborhoods should be protected to maintain quality residential neighborhoods for the continuation of the family-living life style.

An adequate level of public and private community-related services, as well as access to those services, should be provided.

A reasonable balance between public costs and revenues must be maintained.

Accessibility to jobs, goods, and services for all residents should be strived for in a manner consistent with environmental quality aims.

Avenues for effective citizen participation in the Town's decision-making process should be provided.

Natural habitat areas and related animal life must be protected.

Outdoor recreational resources must be safeguarded, including scenic, historic, and cultural values, as well as areas needed to meet the recreational needs of the community and the region.

These broad aims have been translated into more specific policies and programs in each of the seven initial elements of the General Plan: Land Use; Open Space and Conservation; Housing; Community Services and Commercial Facilities; Circulation and Scenic Highways; Seismic Safety; and Community Appearance and Environmental Quality.

The Land Use Element Map is a composite of a series of complex and detailed recommendations which appear as part of this General Plan. The depiction in the Land Use Map is necessarily broad. (Due to the complexity of the Land Use Plan and Associated Overlaying Maps, the Map series is not attached, but is available in the Community Services Department.) Yet the map and the accompanying overlays depict major policies around which the General Plan revolves: open space preservation along the ridgetops and shoreline areas; hiking and bicycle trails throughout the Town provide access to these open space areas; limited new residential areas provide room for family-oriented and moderate cost housing without greatly expanding the Town's population; commercial areas designed to provide neighborhood-level services appear throughout the Town; a regional commercial/office/industrial area provides both local and regional services; community facilities and services are upgraded and/or consolidated; and public transit is encouraged.

As well as summarizing physical policies, the Land Use Element Map also depicts the interrelationship between land use decisions. For example, the overall land use and circulation pattern recommended reinforces the Town's residential nature and maintains Corte Madera's small-town scale.

LAND USE SUMMARY. Each element of the Corte Madera Plan contains numerous and often interdependent recommendations. The sum of all those policies collectively comprise the Town's land use pattern. Major recommendations of each element are indicated below.

OPEN SPACE AND CONSERVATION. Every effort should be made to retain permanent open space in those undeveloped lands which exhibit high natural habitat value, impose severe development constraints of topographic and geologic and seismic hazard, or possess an important scenic, recreational, archeological or botanical resource.

Ridgetops and major slope areas should be directed toward permanent open space to provide a substantial natural greenbelt between communities and to reinforce the natural open space and wooded quality of Corte Madera.

A series of region-serving parks and open spaces should be developed for the benefit of Corte Madera and Marin County. These include a shoreline park in the filled areas of the Muzzi Property, a lineal park over the railroad right-of-way which will be combined with a pedestrian/bicycle trail, and hiking trails over the Tiburon and Corte Madera Ridges.

A series of local-serving parks should be developed throughout the Town which can serve all residents. This includes acquisition of Menke Park in the Town Square, San Clemente Creek Site for visual park use, and use of part of the undeveloped site adjacent to Corte Madera Community Church for park purposes. In addition, a park with playing fields should be developed in East Corte Madera. The maintenance of the Town Park and upgrading of play facilities at the schools should be emphasized.

Marshlands should be preserved because of their high natural habitat values. Marshes in Corte Madera include the Muzzi, Humber, Hahn and Triangular Marshes and the Corte Madera Ecological Reserve (formerly the Heerdt Marsh. It should be noted that any proposals for the use of these areas will be evaluated for their compatibility with the retention of the marsh habitat. The boundaries between the marsh and non-marsh areas shown on the Land Use Element Map are only generally drawn and will be subject to detailed investigation at the time of the review of any development plan.

HOUSING : Residential areas should be protected from the intrusion of incompatible land uses and traffic problems. Programs should be instituted to upgrade the condition of older homes in order to maintain the existing character of Corte Madera's neighborhoods.

New housing should be controlled in undeveloped areas in order to provide a mix of housing types and costs to allow an increase in low and moderate income housing. The design of all housing should be compatible with the existing form and scale of the Town.

Subdivisions of larger homes, or the addition of new units, should be allowed under certain conditions in neighborhoods where it would not alter the living patterns and would be compatible with existing development.

Wherever possible the development of additional dwelling units should be encouraged to follow the guidance of the Town through the Planned Development District process.

Those ridge and shoreline areas suitable for some residential development are designated as 'open residential' on the Land Use Element Map because of their steep slopes, geologic hazards, natural habitats, scenic value, and extensive vegetation. The maximum density of any one site should not exceed two units per acre, except in cases where a specific plan has been approved, and scenic and open space values of the site are preserved.

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COMMUNITY SERVICES. All public facilities, which include all those facilities owned by a public agency and used for a public purpose except those designated for park and open space purposes, are shown as such on the Land Use Element Map. They include public schools, Town Hall, the Department of Motor Vehicles, the California Highway Patrol, and the Marin Municipal Water District offices.

All Fire Department facilities and operations shall be updated as required.

Elementary school boundaries should be redrawn to conform more closely to neighborhood and Town boundaries in order to establish a sense of neighborhood identification and to reduce busing.

COMMERCIAL FACILITIES. A region-serving commercial/office/industrial area should be zoned in the U.S. 101 corridor as indicated on the Land Use Element Map between the north and south boundaries of the Town. To insure that the design of the area reflects its sensitive position in the Townscape this area shall become subject to Design Review.

Additionally, the large undeveloped 78-acre property known as the Hahn site shall become subject to additional development standards and design criteria including but not limited to the following:

1. One unified plan must be submitted for all the properties included in 78-acre site, including properties owned by Humber, Boro and Hahn. That plan must address dedicated of marshland, traffic improvements and other measures acceptable to the Town to mitigate the impacts of development.

a. Properties Included in Application

1. Any plan should include the triangular parcel presently owned by Vernon Humber (also known as the Humber Marsh) to mitigate the use of part of the Hahn Marsh as a retention basin.
2. The railroad right-of-way may be deleted from the plan, unless it is required for mitigation.

b. Dedication of Marshland.

1. At least 32 acres of marshland must be dedicated to the Town, including the Maggiori-Ghilotti site and the triangular Humber piece. This area should be restored to a "natural state" in a manner acceptable to the Town. The Maggiora-Ghilotti site could be restored as a passive interpretative center.
2. Any plan should preserve the linear drainage canal with high habitat value located west of the railroad right-of-way. If it is used as drainage for a project, it should be maintained by the project.

3. Improvements to the marsh habitat will be required.
2. The amount of retail commercial space on the site shall be limited to between 300,000 and 400,000 sq. ft.

The amount of retail commercial space permitted will strongly depend on the specific high-quality retail tenants proposed by an applicant.
3. Any development plan shall include a mixture of uses, which may include retail sales and services; offices; restaurants; and residences.
 - a. Offices should be limited to some second-story locations with Bay views. Retail uses may be preferable if they will generate no more traffic during the peak hour.
 - b. Residential use of part of the site is desirable.
4. The overall design and layout of a project on this site shall clearly take into account Corte Madera's small-town character and should reflect the aesthetic requirements imposed on the site by its position within the various view corridors between the Bay and surrounding hills.
5. No project may be approved unless off-site and on-site transportation improvements acceptable to the Town are proposed which will achieve acceptable levels of service, on local streets, as defined in the Circulation Element.

Any project on the site shall be responsible for funding its fair share of all off-site and on-site transportation improvement measures needed to achieve acceptable levels of service.
6. An occupancy permit may not be granted for any development on the site until the traffic improvements required to be installed by the developer have been completed to the extent deemed necessary by the Town.
7. All changes to surface or subsurface drainage due to any proposed development shall be mitigated by properly engineered projects (which might include pumping facilities, raised dikes, etc.) to protect surrounding areas.
8. All off-site and on-site improvements required to mitigate the impact of a project shall be funded by the developer.
9. A long-term maintenance bond or other adequate guarantee shall be required to protect the Town against damage to roads, utilities, and other public facilities from future subsidence and related soils or physical problems that result from the proposed development.
10. The Town desires a reputable, financially solvent developer to develop the site.

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Existing neighborhood and community-service commercial areas should be zoned to retain and enhance convenient shopping for residents at locations near their homes. This would include the upgrading of the Town Square area, Park Madera Center and the upgrading of lighting and landscaping at the Paradise Drive Shopping Center to serve residents of east Corte Madera.

The position of the commercial area situated between San Clemente and Paradise Drives is such that it forms the entrance way to East Corte Madera. To encourage this area to become more responsible to the location within the Townscape, specific design criteria should be applied to the Design Review process now in effect.

To ensure that traffic generated by new commercial developments does not exceed the capacity of local streets, and to maintain Corte Madera's small-town scale, new offices and other commercial developments should not exceed an intensity of 14,000 to 15,000 square feet per gross acre. This figure may be modified in the future if new traffic studies demonstrate that local streets do have adequate capacity for increased development and that more intense development is compatible with Corte Madera's small-town character.

CIRCULATION AND SCENIC HIGHWAYS. Freeway safety and circulation should be improved. The use of local streets as a bypass to the freeway during the commuter peak period should be restricted.

Acceptable levels of service, as defined in the Circulation Element, should be maintained on local streets. Costs for all transportation measures needed to maintain acceptable levels of service should be shared by all new projects based upon the traffic generated by each project.

Development of rapid transit on or immediately adjacent to the U.S. 101 corridor and construction of a transit station north of Tamalpais Drive should be encouraged.

Intra-town transit service should be established to connect Corte Madera residents with rapid transit, shopping, and other public services and facilities.

Paradise Drive, San Clemente Drive, Tamalpais Drive, and Corte Madera Avenue should be designated local scenic roadways and U.S. 101 should be designated as part of the California Scenic highway system.

A network of pedestrian, bicycle and hiking trails should be developed throughout Corte Madera to link residential areas with public and private services and facilities of Corte Madera and adjacent communities.

SEISMIC SAFETY. Residents should be protected against natural hazards by prohibiting or controlling development on sites with hazards such as landslide, tsunami, subsidence, extreme topography, erosion, unstable geology and fire.

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COMMUNITY APPEARANCE AND ENVIRONMENTAL QUALITY. The natural state of the ridgetops, visible slopes and unfilled shoreline areas, including the marshes, mudflats and other portions with unique natural habitats, should predominate. Further, existing vegetation, particularly the heavily wooded areas in the hills and the mature street trees should be protected.

A series of design district and design corridors should be instituted. Design criteria should then be established that reflect the individual character of these areas. Regulations concerning noise abatement should be strengthened and criteria should be developed to control land uses adjacent to such significant noise sources as the freeway. Air pollution levels should be reduced through encouraging more frequent use of public transit, and developments or activities which would diminish air quality should be discouraged.

IMPLEMENTATION SUMMARY. The policies listed above require three types of implementation techniques: regulation; public acquisition; capital improvement financing.

REGULATION. The major purpose of regulation is to insure that development takes place in a manner which recognizes the residential character of Corte Madera and reflects the small-town scale of the community. Regulation is also an important tool to assure that all development considers the limitations and advantages of a specific site, including seismic, geologic, topographic, scenic and public service factors. The purpose of such regulation is two-fold. First, it protects residents against dangers to life and property and, second, it helps maintain the natural setting of Corte Madera. While the major form of regulation is zoning, other ordinances can be enacted by the Town for use in conjunction with the requirements and criteria set forth in the Zoning Ordinance. Some of the regulatory techniques recommended in the Corte Madera General Plan are:

MANDATORY PLANNED DEVELOPMENT DISTRICT PROVISIONS would superimpose a Planned Development District overlay zone on some existing zoning. This would permit the Town to take the initiative and require the developer to employ design and construction techniques which are responsive to specific site conditions. The original zoning district would determine the type of land use permitted, but the "overlay" Planned Development District would contain provisions to relax rigid standards (e.g., setback, spacing between buildings, etc.) of the underlying zone and permit review of site planning and design.

NATURAL HABITAT PROTECTION DISTRICTS would be applied to Bayshore areas with unique natural habitat resources. This district would contain provisions prohibiting further division of land, restricting development to portions of sites with the lowest resource value, and providing design

*Amended January 3, 1978.

criteria to minimize both adverse impacts on wildlife and natural processes as well as alteration of the natural setting.

LAND CAPACITY ORDINANCE would be applied to hillsides to determine the development capacity of the land. The ordinance would consider factors of slope, seismic or other public safety hazards, road access, substantial natural habitat, and other information necessary to determine the maximum amount of development permitted on a site.

LOW AND MODERATE-INCOME HOUSING INCENTIVES should be used to encourage an increase in the provision of low and moderate-income housing in the projected residential developments in Corte Madera. Under this system, a developer could be granted a bonus to increase the number of units in his project above that permitted by the zoning if he includes a specified number of low and moderate-income housing units in his development. The incentive may allow an increase in dwelling units not less than 10 percent nor greater than 15 percent of the initial number of units.

SUPPLEMENTAL RESIDENTIAL ZONING provisions should be applied in Corte Madera to permit the addition of second units to existing homes or to allow the subdivision or larger homes to enable occupancy by more than one family. These alterations should require a conditional use permit subject to specific regulations regarding design, parking and effects on adjacent structures and the environment. Additionally, these units should be directed almost exclusively to low and moderate-income individuals or families.

RISK ZONING FOR BAY FILLS should be used in areas underlain by Bay Mud. Criteria should be developed for each of several zones containing engineering safety requirements, allowable land uses and site investigations necessary for development. Land use for fills over the deeper compressible soils should be so restricted as to prohibit development unless special precautions are followed.

DESIGN REVIEW ORDINANCE should be revised to insure that design review takes place during the initial planning stages and can be instrumental in affecting the outcome of the project. The Town will be required to designate residential and non-residential design districts, as well as design corridors for both scenic roadways and pedestrian/bicycle trails. In addition the Town should prepare and adopt explicit statements of community design objectives for these various districts and corridors. This approach has several advantages in that it provides the applicant with a clear statement of the conditions his development must observe before he starts his design, and it insures a sound legal basis for design review.

*Amended January 3, 1978.

SIGN ORDINANCE should be amended to establish distinctive sign districts which can be applied as part of the design review process. The ordinance should clearly recognize that type, siting and size of sign should vary according to the function of the area, the manner in which the primary sign viewer experiences the sign (e.g., as a motorist or pedestrian), and the area's relationship to other districts or features.

HERITAGE TREE ORDINANCE should be enacted to protect mature trees in the Town from removal or damage.

PUBLIC ACQUISITION. In specific cases, particularly in regard to implementing many of the open space and conservation policies, it will be necessary for the Town to purchase lands to assure maximum public benefit. Some of the lands to be considered for future public acquisition include the Heerdt Marsh, Muzzi Property, Triangular Marsh, large portions of the Deffebach and Stevenson Properties, Nichelini Property, Upper Hidden Valley and Taralara.

A priority list for region-serving and local-serving open spaces has been developed. Factors considered are:

1. The degree to which the open space benefits are primarily local, and therefore, a local responsibility;
2. The degree to which the Town must rely on local funds as a source for acquisition because of a lack of other available resources;
3. The degree to which the major open space benefits can only be secured through public acquisition; and
4. The degree of vulnerability to development.

Many sources of funds have been explored and recommendations have been made as to the type to be used for each of the open spaces. These include local funds such as general funds, tax increment bonds, general obligation bonds; a Special Assessment District; county funds such as those available from the Marin Open Space District; State of California funds such as the Natural Habitat and Ecological Preserve Program; and United States Government funds such as the Federal Land and Water Conservation Fund and the Federal Open Space Land Program. In addition, the adjacent jurisdictions of Corte Madera, Mill Valley and Larkspur can form a district to acquire open spaces such as Northridge Lands or portions of the railroad right-of-way.

*Amended January 3, 1978.

CAPITAL IMPROVEMENTS. Many of the circulation, public service, street design and some of the housing policies will require the use of funds from the Town's capital improvement program to achieve desired objectives. However, much of the Town's expenses can be supplemented by outside funds from the state and federal governments, particularly in regard to roadway improvements, housing rehabilitation, and in some cases, improvements in public services, such as sanitary sewers. The major source of local funds will be derived from property taxes and the local share of the sales tax revenue. In some cases, the Town has the option of using general obligation bonds.

*Amended January 3, 1978.

OPEN SPACE CONSERVATION AND RECREATION ELEMENT

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OPEN SPACE, CONSERVATION, AND RECREATION ELEMENT

PURPOSES

The Open Space, Conservation, and Recreation Element serves to promote four basic aims; (1) conservation and sound utilization of natural resources; (2) protection of natural habitat areas and related animal life; (3) safeguarding outdoor recreation resources including scenic, historic and cultural values as well as areas needed to meet the community's and region's recreation needs; and (4) prevention of hazard to life or property where soils, geology, topography or other factors and combination thereof constitute a potential threat. General town-wide policies to achieve these broad aims are set forth below. These are followed by a description of special conditions which must be considered, more specific policies for critical sub-areas of the community and a program for assuring compliance with the policies of this element.

The provisions set forth serve to meet the local requirements established in the State Law Government Code Sections 65302, 65303(a) and 65560 which mandate the addition of an Open Sapce and Conservation Element to the general plan, and permit adoption of a Recreation Element. These three sections require the consideration and protection of the following: natural resources such as water and soils, wildlife resources, scenic beauty and recreation resources, a comprehensive system of recreation areas, plus avoidance of hazard to life and property due to natural factors or phenomena.

These open space, conservation and recreation provisons also provide the basis for preparing and adopting open space zoning provisions which are mandated in Article 10.5 (commencing with Section 65560) of the State Law. Thus, the intent of these present provisions is not to take or condemn any property, but rather to establish clear policies upon which to prepare development controls which will promote the aims set forth in this element and to provide a rational basis to establish priorities for expending public monies for open space acquisition.

Therefore, it shall be the policy of the Town of Corte Madera to aggressively pursue and initiate action to preserve and acquire open space, but nothing contained herein is to be construed as a present decision to acquire any particular parcel of property or interest therein.

TOWN-WIDE POLICIES

To achieve the broad open space, conservation, and recreation aims identified above, a series of more definite, but not site specific, policies is outlined as a guide for future public and private actions in Corte Madera and its immediate environs. These policies, in turn, determine the specific community position for specific and critical sites through the community, but with full recognition of the continuing legal rights of both the property owners and the community as a whole.

1. To preserve areas of significant marine and wildlife habitat value.
2. To preserve the natural appearance of hills, ridgelines and other prominent or significant landforms.
3. To protect the Town's wooded character by preserving established vegetation.
4. To maintain the Town's relationship to San Francisco Bay by minimizing alteration of the shoreline, assuring public access and protection and enhancement of Bay Views.
5. To safeguard areas and sites of historical and archeological significance.
6. To preserve in open space uses, sites having high recreation value or potential to achieve the minimum standard of 5 to 6 acres of active recreation facilities for each 1,000 Town residents; and to distribute the facilities so that are within easy access to all residents.
7. To provide for public access and levels of use of all open space areas commensurate with the ability of the open space resources to withstand use without degradation.
8. To enhance the recreational use and protect the quality of all open water areas in Town.
9. To protect scenic views from all major public areas.
10. To prohibit or regulate development on sites having history or threat of slope instability.
11. To prohibit or regulate development on sites having history or threat of subsidence.
12. To prohibit or regulate development on sites having history or threat of seismic dangers including those resulting from liquefaction, shaking, ground failure, ground rupture, tsunami and seiche.
13. To require detailed and comprehensive investigation of geologic conditions for all development in areas subject to geologic hazards.
14. To require detailed and comprehensive investigations of all sites; prior to development, to anticipate and avoid dangers to seismic hazards.
15. To maintain a substantial greenbelt spanning the southern boundaries to the Town for the purpose of separating Corte Madera from its neighbors and preventing run-on urban sprawl.

EXISTING CONDITIONS

A summation of existing conditions to be governed by these policies follows:

1. UNIQUE NATURAL HABITAT

a) This primarily refers to the natural habitat areas in the marshes and upland portions of the Bayfront which support a large diversity of marine and wildlife species, some of which are rare and endangered. Additionally, the marshlands and mudflats are important to the health and condition of the Bay waters.

2. SUBSTANTIAL NATURAL HABITAT

a) Although not fully documented as to species type and diversity, the hill and ridge areas support a large number of birds and small mammals.

3. SCENIC RESOURCES

a) Lands which are visually important to the local community and regional setting of Corte Madera including wooded areas and significant hill forms.

b) View locations from which vistas of the hills, ridges, San Francisco Bay or East Bay are available.

4. RECREATION RESOURCES

a) Sites which are now or have the potential to be active recreation areas for use by Corte Madera residents, or for low intensity recreational and educational pursuits such as that which may be possible on the already-filled portions near the Bayfront.

5. ARCHEOLOGICAL SITES

a) Areas of archeological importance which are mainly found in the vicinity of Ring Mountain where Indian petroglyphs have been discovered.

OPEN SPACE VALUES

There are several different types of open space lands in the Corte Madera planning area. East of U.S. 101 are low lying areas, some of which are marshes subject to tidal action. This includes the 95 acre generally known as the Heerdt Property, 74.1 areas of which is known as the Heerdt Marsh, the last remnant of the watery lowlands which formerly stretched from the shore of San Francisco Bay to the foothills behind Corte Madera, Larkspur,

Kentfield and Ross. This marshland still possesses all of the major inlets and has much the same appearance it did almost one hundred years ago.

South of the Heerdt Marsh and separated by a tidal slough is approximately 265 acres usually referred to as the Muzzi Property, a diked-off area bordered by the Northwestern Pacific Railroad on the west, San Francisco Bay on the east, and San Clemente Creek on the south. The dikes were constructed in the late 1950's and the flood gates closed in 1967, prior to the formation of the Bay Conservation and Development Commission.

The Golden Gate Bridge and Transit District purchased the property in 1973. BCDC approval was obtained to fill 66 acres with dredged spoils from the Larkspur Ferry Terminal. As a condition of approval of the fill permit, the District agreed to breach the dikes in four places and attempt to restore 125 acres of Marsh. As of 1977, the restoration had begun.

The third, and only other tidal salt marsh in the area is the 11 acre triangular marsh adjacent to the San Clemente School near Paradise Drive. Similar to the Heerdt and Muzzi marshes, the Triangular Marsh is in private ownership except for the possibility that public rights in any of them may exist under the rationale stated by the California Supreme Court in the Gion and Dietz decisions.

West of the Muzzi Property and the railroad tracks is a 70 acre parcel known as the Hahn Property, an area diked off from tidal action in the late 1800's. The northern portion contains two ponds which support a great number of aquatic plants and animals, but probably as a result of the variable salinity of the ponds (due to flooding, leaching and evaporation), the species diversity is low. However, a large variety of birds, including dabbling ducks, grebes, herons, egrets and northern phalarope use the ponds for feeding and resting. The edges of the ponds support salt-tolerant vegetation typical of salt marshes, such as salt grass, alkali heath and some pickleweed. The area is also a rich meadow mouse habitat.

A drainage ditch bisects the property and another borders the railroad tracks. South of the drainage ditch the area is mostly filled and covered with typical grassland vegetation with a large population of meadowmice. Egrets, herons, short-eared owls, several species of hawks, white-tailed kites and the burrowing owls that live along the banks of the drainage ditches all hunt extensively over this area. Since raptors, which include hawks, kites and owls, are all considered endangered due to loss of habitat, much of this property assumes great importance as wildlife habitat.

Finally, between the railroad tracks north of the Hahn property and west of the Heerdt Marsh is a 3.8 acre parcel owned by V. Humber that is also diked off from tidal action. It is covered with marsh plants and grasses and serves as habitat for meadow mice, hawks, herons, and other birds. It may serve as habitat for the endangered salt mouse harvest mouse.

*Amended January 3, 1978.

Other major open space lands in Corte Madera include the hills and ridges which not only support many species of wildlife, but also provide a natural greenbelt between the communities of Corte Madera and Tiburon to the east and south and Mill Valley to the west and south. The existence of this visual amenity of woods and openness contributes to each community's individual identity by providing distinct town boundaries, thus lessening the visual impact of such a highly urbanized area. However, similar to the Bayfront lands previously discussed, much of the ridge and hill areas are in private ownership and are subject to development pressures. The large Deffebach and Stevenson Properties in and around the Tiburon Ridge east of U.S. 101 lie mainly in unincorporated areas and have been proposed for residential development by the owners, even though large segments of these properties exhibit geologic conditions which may be hazardous to life and property if built on.

West of the freeway is the Northridge, an area in excess of 1,300 acres, approximately 95 acres of which lie within the corporate limits of Corte Madera. The major portion of the area is generally referred to as the Nichelini Property and housing proposals have also been made for this site.

DEVELOPMENT CONSTRAINTS

A large portion of the undeveloped properties within the Town's planning area is subject to a variety of hazards or constraints. This will require that development of these sites either be prohibited or restricted with careful regulation in order to safeguard and protect against danger to life and property. Generally, these constraints include topography, geologic conditions and seismic hazards. The Development Constraints Map, on file in the Community Services Department, summarizes these three conditions where they exist in the undeveloped portions of the planning area. Specifically, the map shows the following limitations on the development of the land:

1. Topography

- a) On slopes greater than 40 percent all development should be prohibited in the absence of extensive soils analysis and engineering feasibility study.
- b) Slopes ranging from 20 to 40 percent where development should be restricted through the use of specific regulatory controls.

2. Geologic Hazards

- a) This includes sites which are known to contain large areas of melange, the term applied to sheared rocks of the Franciscan Formation,

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which are particularly susceptible to landsliding and necessitate extreme care when designing cut slopes or structure foundations on them; areas of slope debris and ravine fill; and areas where landslides have occurred. Even though some older slides may be partially stabilized, they are susceptible to renewed movement if their natural conditions of slope, drainage or moisture content are disturbed. It should be noted that the mapping of these geologic hazards has not been done in detail and, therefore, thorough investigations should be conducted to determine possible dangers in areas subject to geologic hazards prior to any development.

3. Ground Failure and Subsidence

(a) Where there are areas of man-made fill or Bay Mud where differential settlement, liquefaction and other seismic dangers may occur, a detailed and comprehensive investigation should be made of these areas prior to any development.

4. Tsunami

Where areas are known to be subject to possible tidal wave inundation, extensive engineering and drainage plans shall be required prior to development.

RECREATION

There are relatively few local or county-wide parks for active recreation to serve about 160,000 persons living in southern and central Marin County. National and State parks and recreation areas in this portion of Marin--- including Muir Woods, (the newly formed Golden Gate National Recreation Area), Angel Island, Mount Tamalpais, Stinson and Muir Beaches and Marin Headlands which are mostly for hiking and picnicking and are difficult to get to without an automobile. (Angel Island requires ferry access.) A large portion of the people favor water-based recreation facilities for swimming, fishing, boating, walking, picnicking, camping or just for looking. Yet, most of the parks enumerated above are inland and wooded and have few water-related facilities. With the possible exception of Stinson Beach, those that are situated by the water (mainly the Pacific Ocean) are too dangerous for most water-related sports.

There are only two major parks along San Francisco Bay in Southern or Central Marin. The first is the county-maintained McNear's Beach Park (53 acres with picnicking, fishing and swimming) located on the Bay near Pt. San Pedro north-east of San Rafael, but this is not conveniently located for most Southern Marin Residents. The second, 19-acre Paradise Beach Park, about five miles southeast of Corte Madera. Together, these two parks offer less than 0.5 acres of Bayfront land for every 1,000 persons living in southern and central Marin, a suprisingly low figure for an area whose eastern boundary is San Francisco Bay.

Throughout Marin County, including Corte Madera, there is an absence of level, open park lands suitable for general recreational purposes. The few acres of level park land in the Town are comprised of the Corte Madera Town Park, a 20 acre area on Tamalpais Drive west of the freeway. This park is intended to serve the entire Town population of over 9,000 persons (about 2 acres/1,000 persons), but not only is the park insufficient in area if it is to serve all residents, it is also inconveniently located for the 27 percent (2,450 persons) of the population that live east of U.S. 101. The residents in that portion of Town mainly rely on small recreation areas in conjunction with the San Clemente and Granada Schools.

Although it may appear arbitrary to designate an acre/1,000 persons standard for parks, it does tend to reflect an increasing population and can serve as a bench mark of the amount of space needed. Figures vary among publications and associations, but the average appears to be about a total of 5 to 6 acres of citywide park and local neighborhood play-ground facilities for each 1,000 persons. However, these figures do not reflect private recreation areas and indoor facilities such as the Recreation Center on Tamalpais Drive adjacent to the Town Park, but such facilities can be taken into account when planning new sites.

SPECIFIC AREA POLICIES

Specific area policies are illustrated in the Open Space, Conservation and Recreation Policy Map, on file in the Planning Department. These definitive policies focus on the Town-wide policies enumerated at the beginning of this element by making these broader objectives site specific through the application of the information provided in the Open Space Values and Development Constraints Map, on file in the Planning Department. The combination of these latter two maps indicate that most of the undeveloped sites exhibit more than one value or development constraint which warrant its consideration for preservation; therefore, the Open Space, Conservation and Recreation Element map indicates the primary aim considered to be significant in itself to require preservation or protection, as well as one or more secondary aims (where applicable) which further contribute to the importance of the site to be included in this joint element. In the Bayfront areas, the unique nature of the natural habitat is considered as the primary aim, whereas along the hills and ridges, either scenic or hazard prevention is recorded as the primary aim. Although the entire ridge top area is considered to be scenic, protection of life and property against hazards is regarded to be the primary purpose for preservation. Therefore, scenic preservation areas along the ridge tops are shown as primary aims only in locations where they do not co-exist with topographic constraints or geologic and seismic hazards.

The primary and secondary aims applied to the specific areas which are delineated on the Open Space, Conservation and Recreation Policy Map are listed below.

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PRIMARY AIMS

- a) Natural Habitat Protection. Areas identified as unique natural habitat in the Open Space Values Map.
- b) Scenic Preservation. Locations cited for their important scenic value in the Open Space Values Map provided these areas do not also contain topographic or geologic and seismic hazards as indicated in the Development Constraints Map.
- c) Hazard Prevention. Locations which should not be developed because of potential danger to life and property as indicated in the Development Constraints Map. These specifically refer to topographic or geologic hazards in the hill and ridge areas.
- d) Recreation Area. Sites which should be preserved primarily for their ability to provide needed recreational facilities.
- e) Existing Recreation Area Improvements. These are recreation areas which, when improved, will offer Town residents a more complete, diversified and geographically distributed Town-wide recreation system.

SECONDARY AIMS

- a) Natural Habitat Protection. Areas which exhibit significant natural habitat value.
- b) Scenic Preservation. Areas which are scenic in themselves but are secondary in their importance for preservation to other primary aims, or areas which provide view locations as indicated in the Open Space Values Map.
- c) Hazard Prevention. Areas which contain hazards or topographic constraints, but are not necessarily regarded to be dangerous enough to prohibit development if specific regulations and controls are imposed.
- d) Recreation Areas. Open space sites which can also accommodate Low-intensity recreation activities such as trails, picnicking, etc.
- e) Archeological Protection. Areas which have been identified to contain significant archeological sites.

A description of the "specific area policies" follows.

The policy description of the respective open space sites sets forth the allowable use and related conditions for development in the event that the public is unable to acquire sites recommended for permanent open space. It shall, however, be the policy of the Town to fully explore and seek to obtain all feasible funding sources prior to permitting development on sites designated for permanent open space. The Town shall also seek cooperative funding agreements with adjoining communities where the open space

sites extend over the town boundaries or in areas which serve residents of adjoining communities. A brief reference to the primary funding source is included under each area discussion. Starting on page 20 a fuller description and discussion of funding sources is provided.

TIBURON PENINSULA RIDGE. Analysis of the approximately 546 acres of undeveloped lands along and adjoining the Tiburon Ridge show that : (1) Less than 294 acres, or 54 percent, of the entire area is suitable for development as determined by consideration of geologic hazards and topographic constraints; and (2) all of this area has high scenic value, principally the 110 acre ridge top (20 percent of the entire area) which provides the last open space separation between communities in southern Marin, provides sites of archeological importance, or a combination thereof. The remaining property is considered to be a scenic resource (as well as containing habitat areas) both for its hill form and wooded vegetation in selected portions. Moreover, problems of providing on and off-site roads and other public services are severely restricted by all of these same factors. This is especially true along ridge tops where water is not readily available. Roads must transverse rugged lands which increases construction and maintenance costs for roads and utilities. These constraints lead to economic pressures to provide greater levels of development to compensate for these high land preparation and service costs on a site which is capable of supporting only a limited number of dwelling units.

The diverse geology of the area is also especially noteworthy and the areas importance as a scientific and educational resource must be recognized. Furthermore, the geologic conditions have also produced unique botanical conditions in the portions underlain by serpentine. For this reason the serpentine areas have been shown as having unique habitat value.

With recognition of these factors, it is the policy to seek to retain in open space all of the lands shown in the Tiburon Peninsula Ridge area which includes upper Madera del Presidio on the Open Space and Conservation Element Map. The Open Space and Conservation Element Map is a consolidation of the three Basemaps showing Open Space Values (OP-1) Development Constraints (OP-2) and Open Space and Conservation Policy (OP-3). The entire area (additional ridge top lands exist outside of the Corte Madera planning area under the jurisdiction of the City of Tiburon) should be considered for public purchase at a price which reflects a realistic development potential. Often, assessed valuation is based upon an assumption of the development capacity of an area without due consideration or investigation given to the development constraints which are imposed on the land.

In the event that it is not deemed feasible to acquire these lands within the immediate future, limited development may be permitted. In these portions of the site where development may be permitted, it must be proved by soils analysis and engineering feasibility studies, that the topographic conditions and the geologic hazards that are present can be dealt within a manner that would not impinge on the aesthetic values mentioned above and would eliminate any threat to the health, safety or welfare of the residents of Corte Madera. Additionally, the ridge top should be preserved in open space with

buildings and other structures, including roads, sited on the lower portions in a manner which preserves the natural open space appearance of the entire ridge and guarantees protection of existing petroglyphs. The ridge top area to be preserved is defined as a combination of the area within a line 150 horizontal feet in both directions from the top of the ridge plus a line 150 vertical feet in both directions from the top of the ridge, as well as other lower protruding ridges which give the appearance of being the ridgeline when viewed from surrounding areas. Stringent design controls should be applied to insure that permitted development does not alter existing land forms and vegetation, and that the overall natural appearance of the area is maintained.

The most reasonable sources of open space funding appear to be a combination of County Open Space District Funds and special assessment district funds. Additionally, other supplementary funds from private foundations should be sought because of the scientific and educational values.

NORTHRIDGE AREA. The heavily wooded Northridge serves as one of the major open space components of southern Marin. The forested ridge and slopes function as a natural separation between Corte Madera and Mill Valley and provide the dramatic natural backdrop to the Town which contribute so much to its small-scale appearance. These Northridge lands also act as a visual and physical link to the more extensive state and county open spaces around Mt. Tamalpais and offer the potential for linked and complementary hiking and recreation uses. The proximity to the concentrated populations of southern Marin make this general area ideal for these recreation purposes. Moreover, the vegetation consisting of oak, madrone and bay plant communities, redwood groves and grassland provide a diverse habitat for a wide variety of small mammals and birds. The portions of the ridgeland west of Corte Madera Avenue are especially valuable since they are still uninterrupted by urban development and remain an integral part of the extensive open space of the adjoining watershed and state parklands.

Within the Town, four separate sites, the Nichelini Property, upper portions of the Quarry area and knoll portions of the Upper Hidden Valley site, as well as Tara Lara help form the more extensive Northridge area. In total, there are approximately 85 acres of undeveloped land in this portion of Corte Madera. Of this 36.7 acres have grades in excess of 40 percent and 29.5 acres have grades between 20 and 40 percent. There are no known major geologic problems, but the combination of topography, climatic conditions, vegetation, restricted road access and limitations on water service and pressure make this area especially prone to fire dangers. Consequently, the potential for urban development is severely restricted. Policies for each of these areas are discussed below, the overall intent of which is to develop a system of hiking trails and scenic and natural habitat areas which are an integral part of a larger, county open space area.

Due to the overlapping of governmental jurisdiction and the county-wide and area-wide open space benefits of the Northridge, funding should be the joint responsibility of the County and adjoining communities. Therefore, use of the County Open Space District Funds and monies raised by a special assessment district of surrounding areas is recommended.

NICHELINI AREA. Due to the high scenic and recreation value, the undeveloped lands occupying the ridge and north-facing slopes should be considered for acquisition for public open space use. In the event that sufficient public funds are not available for acquisition, development controls should be instituted to ensure proper development.

These regulations should require that: (1) existing major vegetation on the site be preserved; (2) development be limited to areas with adequate access and water pressures to provide reasonable fire safety standards; (3) the ridge top be protected from intrusion by development which would destroy the natural skyline as seen from both Corte Madera and Mill Valley; and (4) hiking access along the ridge be provided. If development must be accommodated, structures should be clustered and access be provided by a series of short, lateral connections to existing improved roads to ensure the minimum physical and visual disruption.

TARA LARA SITE. The heavily forested, 7.2 acre Taralara is an important portion of the Northridge area. Its present use, a single residential structure screened from public view, is consistent with the plans policies to preserve the natural features of this area. Provisions should, however, be made to ensure that in the future, this site is not subdivided for more intensive residential development. Ultimate public acquisition of the site is a recommended possibility.

UPPER HIDDEN VALLEY. The primary importance of the Upper Hidden Valley site results from its scenic contribution both as a part of the landscape backdrop of Corte Madera and Mill Valley and as a location offering a wide range of panoramic views out over Southern Marin. This area offers a unique opportunity to provide a natural area in the midst of an already urbanized one, yet buffered from the visual intrusion of development and noise of the nearby freeway. It is within convenient hiking distance from both Corte Madera and Mill Valley and provides either a dramatic start or finish point for recreation hiking along the Northridge.

It should be the policy to achieve total public ownership of this site. However, if this proves impossible, conditions similar to those proposed for the Nichelini area should be enacted. The most important concerns should be provisions of a hiking connection with the Quarry site and a westward link to the other portions of the Northridge, and preservation of the prominent northeast knoll.

QUARRY SITE. To the extent feasible, the heavily wooded upper portion of the Quarry area should remain in open space and trail access from the lowlands to the Northridge be provided. The heavily wooded areas are very steep and should probably remain free of development in any case. In turn public access for hiking purposes may be provided as a condition if a planned unit development approach is required for the site.

BAYSHORE AREAS. Critical Bayshore areas consist of the Heerdt Marsh, the Muzzi Property, portions of adjoining lands lying between the Northwestern Pacific Railroad right-of-way and U.S. 101, and a triangular shaped marsh area along Paradise Drive. The areas having high natural habitat value are shown in Figure 1, the most valuable of which are the prime marsh areas which encompass the great portion of the Heerdt Property, the triangular area along Paradise Drive and the eastern edge of the Muzzi Property. Additionally, adjoining areas contain other upland habitat values or offer the opportunity for restoration to their original wetland state.

Since these areas are crucial to the health and existence of the many marine and wildlife species, it is essential that all proper steps be taken to protect these natural resources or to enhance them where degeneration has occurred as a result of unregulated urban condition. The Open Space and Conservation Element Map, identifies the areas which should be retained in a natural state if these goals are to be met. More specific policies pertaining to each of these areas are provided below.

State and Federal funds should be pursued for acquisition of the natural habitat areas of the Bayshore lands since these are resources which benefit a much broader segment of the public. Moreover, there are special state and federal funds specifically authorized for this use. Additionally, local and county funds should be used to acquire and develop filled portions for shoreline recreation purposes.

HEERDT MARSH. The primary natural resource value, the marshlands, are subject to the same regulatory powers as any other property, and since portions of the properties are filled areas which might be developed, this could provide the property owners with an appropriate economic return. Nevertheless, it is proposed that, if feasible, the entire area be publicly acquired in order to use the upland portions for recreation and education purposes complementary to the natural area. (It should be noted that the public may already have legal rights in this property pursuant to the doctrine set forth in the Gion and Dietz decision as previously mentioned.) Uses should be restricted to low-intensity shoreline recreation purposes such as picnic facilities, wildlife observation and support facilities for nature interpretative purposes.

MUZZI PROPERTY. The area's high natural resource value, combined with constraints to development due to underlying Bay Mud and threat of partial inundation by tsunami, point to the need for retaining the major portion of the site in open space. The primary purpose of the open space

*Amended January 3, 1978.

should be twofold; preservation of high value habitats and restoration of diked-off former marshlands, as required by BCDC; and possible development of the 66 acres of filled land as a low-intensity marsh-edge park, or as a fresh-water marsh. Marina uses should be specifically excluded since this would require dredging and construction of an access road across areas of high natural value.

In addition, such transportation related uses as a transit terminal, parking lot, or Bridge District Maintenance Yard should be excluded. All of these would serve to further divide East and West Corte Madera, would generate substantial traffic, could have a significant visual impact, and could impinge on the surrounding valuable habitat areas.

HAHN PROPERTY. The northernmost portion of the area bounded by U.S. 101, the Northwestern Pacific Railroad right-of-way and Tamalpais Drive contains several diked salt marsh meanders bordered by salt grass and pickleweed fringe and adjoining grasslands, the combination of which support a diverse wildlife population. This area of approximately 32 acres, should be retained as open space, should have steps taken to improve the habitat conditions and, along with the natural habitat areas of the Heerdt and Muzzi Properties, should be unified and managed as a single entity. Vehicular access through the large areas should be prohibited, but there should be limited provisions for pedestrian and bicycle access for purposes of wildlife observation and enjoyment of the natural setting. In the event that the Lower portion (48 acres) of the site is used for a commercial development, as described in the Land Use Element, further consideration should be given to the protection of the 32 acre natural habitat area.

TRIANGULAR MARSH. Although physically isolated from the areas discussed above, the 11 acre salt marsh along Paradise Drive should remain in its natural state. Since it constitutes only a portion of a larger 21 acre site, it may be possible to ensure its preservation by regulatory means.

HUMBER MARSH. This area's high natural resource value, susceptibility to flooding, underlying Bay mud and poor access all indicate that major portions should remain in open space. If possible, it should be managed as one entity with the Heerdt, Muzzi, and Hahn properties, with steps taken to improve its habitat value. Any open space acquired by a public agency should have only minimal development for public access and education. The Habitat Preservation District provisions should be used to control development on this site.

*Amended January 3, 1978.

RECREATION AREAS

In addition to the previously described open space lands, selective areas throughout the community offer other advantages, particularly for more active types of recreational pursuits. The plan identifies these areas and the intent is twofold: (1) to provide a diversity of recreational opportunities and (2) to provide for a convenient distribution of recreational facilities throughout the community. Policies for these respective areas are set forth below. Each of these should not be seen as isolated sites, but rather as a complementary system of open spaces. (The Circulation Element of the Corte Madera General Plan deals more extensively with the pathway connections between these areas and to the various neighborhoods served.) For the most part, the sites identified below primarily serve the residents of Corte Madera and will, therefore, be heavily dependent upon local funds for acquisition. The most feasible source of open space funds are general obligation bonds.

SAN CLEMENTE CREEK SITE. A small, .975 acre site on Paradise Drive adjoining the fire sub-station provides the only public view of and access to San Clemente Creek. It is proposed, therefore, that this view be maintained and water access be assured for all Town residents. The recreation potential of the site is further enhanced by the possibility that the neighboring fire sub-station grounds could be converted to recreation purposes and made part of this park area. Several alternative ways of achieving the open space objectives for this site are possible: (1) outright public acquisition; (2) partial acquisition of sufficient land to preserve views and access to the water; (3) required dedication of access and protection of view through land use controls. Although of importance, this site's priority for Town acquisition is less significant than other recreation sites in east Corte Madera and, therefore, the third course of action may be most appropriate.

SITE ADJACENT TO ALL FAITHS CHURCH. A series of site features suggest that the use of this 8.7 acre site be for recreational purposes. Included is its central location to the residents of east Corte Madera, its proximity to neighborhood schools, and the presence of Bay Views and a series of terraces which permit onsite separation of various recreation activities.

In planning studies to date, this site has also been recommended for residential uses. This is not seen as a conflict, but rather as an opportunity for cooperative action by the Town and a housing sponsor. This, of course, would require a very carefully prepared overall site plan.

MADERA DEL PRESIDIO AREA. In addition to the natural areas which form a portion of the Tiburon Ridge, there are other portions of the site that represent both substantial natural habitat and scenic resources (as shown on the Open Space Value Map, OP-1). Additionally, areas that represent potential recreational resources are shown as a trail system running the length of the spur ridge to the old Northwestern Pacific Railroad right-of-way to Paradise Drive and a large meadow area adjacent and south of the Hidden Valley Ranch.

KOCH SITE. A major portion of the Koch property, approximately 28.5 acres is presently undeveloped. The site is level and would be appropriate for field sports which cannot be easily accommodated on other sites because they are either too small or have topographical constraints. Therefore, further consideration should be given for the use of a portion of the site for recreational purposes. Although not centrally located within the east Corte Madera area, the site is easily accessible by foot or bicycle from most areas east of U.S. 101.

CORTE MADERA CREEK SITE. Two undeveloped parcels still remain along the south side of the Corte Madera Creek within the Town of Corte Madera. It is recommended that provisions be made for public boat launching accommodations within this area. These facilities should be suitable only for small boats such as canoes, rowboats and kayaks rather than for larger crafts requiring more extensive ramp facilities and boat-trailer parking accommodations. Due to the extremely high land cost of these parcels, the Town should require either dedication of a small portion of these sites for this purpose, or an easement to provide access to the creek.

NORTHWESTERN PACIFIC RAILROAD RIGHT-OF-WAY. Portions of the Northwestern Pacific Railroad right-of-way lying east of U.S. 101 and within the Corte Madera Redevelopment Area, with the exception of that portion included in the commercially zoned area should be secured for use as a lineal park and trail system accommodating pedestrians and bicyclists. It is essential that the right-of-way be developed as an integral part of a larger system linking with the San Quentin Peninsula, as well as with those portions of the right-of-way lying west of U.S. 101 which will afford trail access across the freeway and into the adjacent communities of Mill Valley and Larkspur and subsequently a county-wide system.

The right-of-way varies in width from 50 to 150 feet and this permits both provisions of these trail needs plus accommodations for other recreational purposes. A more detailed park development plan should be prepared for the entire network so that specific recreation needs of adjoining neighborhoods can be incorporated, and other special features provided where desirable. In total, the right-of-way would provide approximately 40 acres of land for these purposes and 3.3 miles of trails.

MENKE PARK. A small open space located in the Town Square is presently owned by the Northwestern Pacific Railroad. Steps should be taken to acquire the site for the Town to assure its retention as the open space focus for the adjoining commercial uses and as a small park feature along the lineal park described above.

EXISTING SCHOOL SITES. Existing school sites serve as an important part of the community's open space and recreational land supply. Additional attention should be given to these areas so that they may fulfill these roles to a greater extent than at present. The Town should enter into cooperative agreements with the School Districts to permit improvements of the school sites for broader community recreational use. Included should be programs to provide more attractive landscaping of the often sparse-appearing play areas and the development of more neighborhood park-type facilities. Ideally, these improvements should be undertaken as neighborhood projects to which local residents can contribute their ideas and labor to the project.

RECOMMENDED IMPLEMENTING APPROACHES

The Open Space, Conservation, and Recreation Policies suggest permanent preservation of 19 privately owned acres in Open Space for scenic preservation, habitat protection, hazard prevention, archeological protection, or recreational purposes. To achieve these policies, it is proper to rely upon two methods of implementation, regulation and public acquisition. Regulation, such as zoning, should be used when the primary intent is to protect the public interest, e.g., in preventing development in hazardous areas or prohibiting development practices which will adversely affect other portions of the community. Public acquisition, however, should be used when the primary intent is for public land use, such as for park or recreational purposes.

The success of the open space portion of the general plan will depend upon a balanced use of these two methods. Care should be taken to ensure that the public is not required to acquire lands to eliminate problems which are justifiably the subject of regulation and, conversely, that regulations are not used to deprive property owners of reasonable use of their land. Appropriate regulatory methods are set forth followed by a discussion of acquisition methods and priorities for acquisition.

REGULATORY METHODS

Suggested regulatory methods serve two purposes; (1) to ensure that development

takes place in a manner which recognizes the limitations and advantages of the specific site, including seismic, geologic, natural resources, topographic scenic and public service factors; and (2) to ensure that land cost accurately reflects reasonable, rather than inflated value. The latter is of special concern since the public should not acquire lands for public use at a price based upon unrealistic assumptions of development potential. Thus it is important that appropriate development controls be instituted even for properties proposed for public acquisition. Similarly, private developers are often forced to purchase land based on a landowner's assumed but unobtainable estimate of development potential, thereby needlessly increasing the price of housing.

MANDATORY PLANNED UNIT PROVISIONS. Generally, the undeveloped sites remaining in Corte Madera have been by-passed because of specific problems or limitations. For these sites, standard zoning and subdivision provisions designed for level, more readily buildable situations are inappropriate. Therefore, it is recommended that the Town use of the Planned Development District in its zoning ordinance and assign this District to remaining undeveloped parcels of one or more acres. This would permit the Town to take the initiative and require the developer to employ design and construction techniques which are responsive to the specific site conditions. The Planned Development District provisions can overlay the existing zoning district. The latter would determine the type of land use permitted and the Planned Development provisions could relax rigid standards of the underlying zone and permit review of site planning and design. This would allow for a range of flexibility within the present zoning ordinance.

NATURAL HABITAT PROTECTION DISTRICT. The Town's zoning ordinance fails to take into consideration the unique situations of the Bayshore areas. In order to protect the natural habitat resources of the wetlands and related uplands, it is proposed that a Natural Habitat Protection District be added to the Town's zoning ordinance. These provisions are intended to be applied to the entire Heerdt and Muzzi Properties, the northern half of the Hahn Property, the Humber Property, and the Triangular Marsh and adjoining lands along Paradise Drive which are in a single-ownership. Briefly, the recommended provisions would: (1) prohibit further divisions of land which would inhibit preparation of a site plan capable of adequately considering and protecting areas of high natural resource value; (2) restrict development, including roads, parking areas and structures to those portions of the site with lowest resource value; (3) impose a maximum site portion which can be devoted to development based upon documentation of natural resource value, and other appropriate considerations and (4) require placement and design of structures, including roads, utilities, parking and buildings, in a manner which minimizes adverse impacts on wildlife and natural processes and alteration of the appearance of the natural setting.

*Amended January 3, 1978.

LAND CAPACITY ORDINANCE. Most of the remaining hill lands in Corte Madera have a number of constraints to development, many of which are discernible only with detailed analysis. It is proposed, therefore, that the concept pioneered by many local slope-density ordinances be refined and an ordinance be drafted to consider other factors directly related to the development capacity of any given piece of land. In addition to the considerations of slope, the following factors should also be used as the basis for determining allowable density:

1. Areas with high hazard potential, i.e., seismic, flooding, or landslide danger;
2. Areas which, though of buildable slope, are physically isolated by steep slopes which preclude reasonable access and, for all practical purposes, make the site unbuildable;
3. Areas with "substantial natural habitat value" which, under the provisions of Assembly Bill 1301, may not be developed;
4. Areas which can only be served by a cul-de-sac, the length of which exceeds a reasonable distance for purposes of fire protection.

With detailed soils and geologic information, allowable density could also be determined on the basis of percent slope and susceptibility of slope failure, erosions, etc., due to specific soils or geologic conditions. For example, a 20 percent slope with highly erodible soils may be more restricted than a 30 percent slope where erosion or slope failure is not a problem.

One of the primary values of this Land Capacity Ordinance would be to assure that the sale price of land reflects its true development potential, not an inflated value based on an unrealistic appraisal of development capacity. At the present, the latter is often the case. This eventually results in pressure to permit densities which require an economic return based on the sale price and, in turn levels of development inappropriate for the specific site. If the recommended provisions were adopted, the buyer would be required to adequately assess the development capacity of the land in advance and arrive at a price consistent with the specific conditions of the site.

With these provisions in effect, the Town would continue to map existing zoning districts, selecting the district whose permitted uses and conditions relative to type and characteristics of a structure most appropriate. The final decision on allowable density however, would be determined eventually by application on the allowable land capacity provisions.

REVISED DEVELOPMENT REVIEW PROCEDURES. Existing procedures relating to the submittal of all planned development applications, rezoning requests, conditional use permits, tentative and final subdivision map submittal, draft and final environmental impact submittals, design review proceedings, grading permits and building permit applications should be reviewed and revised where necessary to ensure that data pertaining to environmental factors such as resource values or natural hazards are adequately documented at appropriate decision points. The revised provisions should require

environmental data and analysis at the initiation of the planning and design stage by the applicant in sufficient depth to establish a concept plan compatible with the requirements which would emerge from a well prepared environmental impact report (EIR). It is recommended that much of the information and analysis required for the EIR be submitted in advance in preparation of a conceptual plan and be used as the basis for preparing the conceptual plan. The conceptual plan, in turn, should be approved in principal by the Town prior to initiation of subsequent and more detailed planning and design and the draft EIR refined and expanded upon once the more detailed plan is completed. In many instances this will require submittal of data such as soils and geologic investigations and preliminary grading at an earlier point than is now required by the Town's present ordinances. Consideration should also be given to the consolidation of certain review procedures, such as the EIR and Design Review to promote greater efficiency and more importantly establish greater consistency in the decisions made.

OPEN SPACE ACQUISITION PROGRAM

The primary intent of the open space acquisition program is to sort out those sites best situated to ensure maximum public use, and to determine which levels of government should be responsible for acquisition and maintenance of those lands. Table 1 identifies the major open space sites considered in the General Plan, summarizes the values and constraints associated with each, and recommends the primary method to secure the open space aim. For the latter, while the table identifies only the primary means, it does assume the backup of regulations which makes acquisition reasonable. Therefore, in the case of the Muzzi Property, Heerdt Property, Tiburon Peninsula Ridge Lands and Northridge area, development would be limited to appropriate areas, and the acquisition price determined by that land area. For example, the Heerdt Property is proposed to be zoned in the Natural Habitat Protection District. This would protect against intensive development in the marshland, but would permit development on the already filled portion of the property. Thus, the value of the property would tend to be based on the development potential of the filled area rather than the entire 95 acre site, (but again, bearing in mind the possible effect of the Gion and Dietz decisions).

ACQUISITION PRIORITIES. Inherent in the preparation of an acquisition program is the establishment of relative importance, or priority, of each open space area. The setting of priorities is a difficult task on several counts. Not only do opinions vary among citizens as to which attributes and aims are more significant to the Town's well-being than others, but also some open spaces primarily serve regional public interests, some are only of local concern, and yet others are a combination of both. The question then arises as to the priority for acquisition based upon the various

governmental bodies concerned. Since it is the intent of the Town's General Plan to provide the basis for action by the Town Council and also for other involved or affected public bodies. Table 2 lists sites in the order of their open space importance and serves as a general guide to the county and other non-local agencies. The main open space concerns reflected in the ranking are: (1) preservation of scarce natural habitats; (2) preservation of the natural scenic setting of southern Marin and the identification of communities resulting from prominent natural features; and (3) promoting opportunities for establishing a county and inter-community recreational system. As indicated in the table, several sites have the same composite ranking. These can be considered to be a priority cluster since no attempt has been made to differentiate individual priority of sites within the same composite ranking.

Table 2 lists sites in the order in which local funds should be expended for those open spaces which would require acquisition as indicated in Table 1. Factors considered are: (1) the degree to which the open space benefits are primarily local, and therefore, a local responsibility; (2) the degree to which the Town must rely on local funds as a source for acquisition because of a lack of other available resources; (3) the degree to which the major open space benefits can be secured through public acquisition; and (4) the degree of vulnerability to development. With respect to consideration No. 2 above, the degree of availability of other than local funds, the Town should fully explore the possibility of acquisition through other financial sources before attempting purchase through local general funds or general obligation bonds. The newly formed Marin County Regional Park and Open Space District has funds available for open space acquisition, the State of California has various programs with funds available to cities for recreation and wildlife preservation and conservation, the federal government has several programs which can be applied to recreation land acquisition, wildlife restoration and area maintenance. In addition, sites with significant portions in public hazard zones may be retained through stringent development regulations and design standards to ensure compatibility with the documented open space values. This method would enable the Town to preserve these areas in open space without direct acquisition. While it may be more beneficial to publicly acquire an entire site for open space, restricted and limited development may be a good alternative when acquisition funds are not immediately available and there are development pressures for the site. There is also the possibility of obtaining public easements through properties for trails or boat launching access.

It should be kept in mind that the priorities as listed in Table 2 assume acceptance and stringent enforcement of the regulatory approaches recommended in the earlier section.

LAND ACQUISITION RESOURCES

The availability of funds for acquisition of designated open space sites is conditioned upon a number of factors including the type of space, location

proposed use, and population to be served. Table 3 identifies the major sources of open space acquisition funds and the sites to which these funds might be applied. Briefly, those sites indicated in the previous section as being primarily of local concern (i.e., the degree of availability of other than local funds as a source for acquisition is low) will depend upon general obligation bonds, except in the redevelopment area where tax increment financing is possible and recommended. In contrast, other sites designated for acquisition have a variety of possible funding sources. A short description of these sources is provided below.

GENERAL FUNDS. The Town could appropriate monies from its general fund, via the annual Capital Improvement Program. This source may be suitable for small acquisition, but is generally considered inadequate when compared against the major cost of the proposed open space program. Moreover, dependence upon these funds necessitates an incremental acquisition approach which has two serious short comings. First, there is the danger that the desired site will no longer be available and second, even if it is available, there is the risk that the purchase price will have sharply increased during the interim.

GENERAL OBLIGATION BONDS. General obligation bonds will be a primary means of securing open space for Town purposes and are preferable over the use of general funds since they permit immediate acquisition and allocate the cost to present and future beneficiaries. The main disadvantage of general obligation bond financing is the requirement for two-thirds voter approval. Although in recent years several bond proposals for open space and conservation have been highly successful, the time required to pass such a proposal, as well as the uncertainty of passage, can result in problems similar to those incurred when using general funds. Specifically, these include the inability to prevent development of the desired site prior to purchase, or there have been acquisition cost increases due to appreciation in land values.

TAX INCREMENT FINANCING. The most practical approach to financing public improvements in some of the shoreline areas is tax increment bond financing. This alternative is available under provisions of the State Community Redevelopment Law, and can be applied only by a redevelopment agency to public improvements located in a redevelopment area and found to benefit development within the redevelopment area. The method is based on the principle that the cost of public improvements incurred for, and benefiting uses designated in, a redevelopment project should be financed by recapturing the increment in value of properties within the project area as a result of such public improvements. More specifically, in the Corte Madera Redevelopment Project Area No. 1 (a 446-acre area, primarily east of U.S. 101 and including the Muzzi and Hahn Properties), the Corte Madera Redevelopment Agency could pledge or allocate the tax revenues generated from the added assessed value within the Project Area to the

retiring bonds, loans and other obligations issued by the Agency for the purpose of financing project costs incurred in initiation and management of the Redevelopment Project. Among eligible project costs to be financed by this alternative are; land acquisition costs for purposes of park development for those portions of the proposed East Corte Madera Shoreline Park and Preserve within the redevelopment project area boundaries; park site improvements, including pedestrian and bicycle trails; and related administrative and planning costs. Ongoing operations and maintenance expenses are not eligible under this alternative.

This method of financing is most appropriate since among the main legislative purposes of the State Redevelopment Law is preservation of shoreline habitat areas and provisions of public access to the shoreline.

COUNTY FUNDS. County Funds for the acquisition of some open spaces may be available from the recently created Marin County Regional Park and Open Space District. Funds will be available for open space purchases throughout the county on the basis of priority. A list of criteria to determine this priority has been developed with such factors as the preservation of ridge tops, areas under development pressure, the degree of an area's visual or ecological importance and the desirability of local contributions being among the most important. Although many of the open spaces in the Corte Madera planning area qualify under these criteria, they must compete with other similar areas throughout the county. Furthermore, the district has stated that about 90 percent of their expenditures shall be used for open space acquisition and incidental costs which will, in effect, require the local jurisdiction to assume the responsibility for the open space maintenance. The district will only maintain and operate those areas where the local jurisdiction cannot provide for acceptable and uniform levels of maintenance.

REAL ESTATE TRANSFER TAX. A potential tax source available to the Town of Corte Madera is the real estate transfer tax. Presently, the County imposes a transfer tax on property transacted within the Town at a rate of 11¢ per \$100 of value of property transacted exclusive of mortgage of which one-half of the monies collected are returned to the Town.

STATE FISH AND GAME DEPARTMENT NATURAL HABITAT AND ECOLOGICAL PRESERVE MANAGEMENT PROGRAM. Natural habitat areas that do not meet requirements of national significance to qualify for federal acquisition and/or management, may be acquired by the State Department of Fish and Game, and managed by them. Where necessary, the State Department of Fish and Game also may contract with the Federal Bureau of Sport Fisheries and Wildlife to have the latter manage the natural habitat area. Funds for these activities come both from the operating budget of the State Department of Fish and Game and other applicable federal grants-in-aid, such as the Land and Water Conservation Fund.

CALIFORNIA PARK AND RECREATION BONDS. AB 392 (1972) enacted the State Beach, Park, Recreational, and Historical Facilities Bond Act of 1974, authorizes issuance of \$200 million in bonds to acquire and establish beaches, parks, recreational facilities and historical resources. Based on the passage of the 1964 Park and Recreation Bond Issues, this potential funding resource could have a significant effect on implementation of the park, open space and natural preserve elements in the Open Space and Conservation Element.

FEDERAL LAND AND WATER CONSERVATION FUND. This fund is administered by the Bureau of Outdoor Recreation of the U.S. Department of Interior, through the California Department of Parks and Recreation. Assistance is provided for acquisition and development projects approved by the state. Eligible development projects may include such varying projects as bicycle paths, hiking trails, roadside picnic stops and marinas.

Priority is given to projects serving urban populations for basic facilities, and for projects for which other Federal Financing is not available. Grants are made on a 50-50 matching basis, with the federal share based on allowable project costs. The projects so financed must be permanently dedicated to public outdoor recreation use, and the agency applying for the funds must assume responsibility for continuing operation and maintenance. About 40% of the appropriated funds under this program are retained by the Federal government for use by such federal agencies as the National Park Service, the Bureau of Outdoor Recreation, the Bureau of Sport Fisheries and Wildlife, and the National Forest Service. Acquisition and development of the railroad right-of-way for a lineal park and bicycle trail system may be applicable to this program.

FEDERAL WILDLIFE RESTORATION PROGRAM (PITTMAN-ROBERTSON PROGRAM.) This program, administered by the Bureau of Sport Fisheries and Wildlife, provides for assistance on a 50-50 matching basis to the State Fish and Game Department for restoring or managing wildlife populations and preservation and improvement of hunting and related uses. In recent years, application of this fund to preservation of wildlife not related to hunting species has been successful.

FEDERAL MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT OF 1972. As provided under this Act, the Secretary of Commerce may, after consultation with appropriate federal agencies based on specific proposed designation of areas for marine protection and sanctuaries, approve such proposals and appropriate funds for acquisition, development and operation of the designated marine sanctuaries. An amount not exceeding \$10 million has been authorized by Congress for each of the two fiscal years in which this Act will operate.

FEDERAL OPEN SPACE LAND PROGRAMS. This program is administered by the U.S. Department of Housing and Urban Development. Assistance is provided on a 50-50 matching basis to local public agencies to cover eligible costs incurred in a project that would: (1) provide, preserve, and develop open space land in urban areas; (2) acquire, improve and restore historic sites; and (3) develop and improve public urban lands for open space. Eligible development includes transportation and circulation facilities, landscaping and basic site improvements, including grading, planting, construction of retaining walls and fencing, installation of utilities, recreation facilities and equipment, including playground apparatus, game fields, fountains and equipment. While this program provides funds for which some of the proposed park and open spaces in the Open Space and Conservation Element are eligible, the prospect of securing assistance from this categorical program is not promising. Both the President and the Secretary of Housing and Urban Development have recommended that this program be terminated, probably at the end of this fiscal year or earlier, and be replaced as one component of the proposed Community Development (special) Revenue Sharing package.

SPECIAL ASSESSMENT DISTRICT. Where open space to be acquired overlaps several local jurisdictions and provides benefits to these jurisdictions consideration should be given to the creation and use of either a special district, or an assessment district, as a means of securing required acquisition funds. Under state laws, an assessment district could be established either by initiative act of the legislative body having jurisdiction over the proposed district, or through petition by property owners having property within the proposed district. Since the proposed district in this instance covers several local jurisdictions, namely, Corte Madera, Larkspur, and Mill Valley, "Legislative body" refers to the County Board of Supervisors.

A special open space district could be formed upon voter approval at a special election and with approval of the County Local Agency Formation Commission. The district has its own board, members of which are also elected by voters, and has the power to establish assessment and maintenance districts within its jurisdiction. In either case, funds are raised by levying an assessment on all property lying within the district boundaries. Assuming that the district covers all of Corte Madera, Larkspur and Mill Valley, an assessment of 1¢ to \$100 assessed value could raise approximately \$12,250 annually, based on total assessed valuation of all property, including public utilities, in the three cities in 1972-73. This fund could be used either independently for open space land acquisition, or to match county open space acquisition funds. The latter approach is recommended, as it must be recognized that while the adjoining cities would enjoy special recreation and scenic benefits from the open space lands in concern, the entire county would be benefited and served as well; an example of this area is the acquisition of the Northridge.

Another possible application is the acquisition of the railroad right-of-way in Corte Madera, Mill Valley and Larkspur, since the success of this proposed lineal trail and parkway depends upon the development of the availability of the right-of-way in all these cities.

East of U.S. 101, the Tiburon Ridge could be acquired through a similar approach recommended for the Northridge and railroad right-of-way, except in this instance the involved jurisdictions would include Corte Madera, Tiburon and Marin County. An alternative method could be a joint power agreement between the three jurisdictions.

PARKLAND DEDICATION AND PARKLAND DEDICATION FEES. In conjunction with new development, the Town can require the dedication of land for parks and/or the payment of parkland dedication fees if suitable parkland is not available on the site. This can be a substantial source of revenue for the development of recreation facilities.

Amended May 4, 1981

OS-25

TABLE 1
SUMMARY OF
OPEN SPACE VALUES AND DEVELOPMENT CONSTRAINTS
AND PRESERVATION METHODS

[illegible]

TABLE 2
PRIORITY OF OPEN SPACE SITES

SITE

FACTORS

Factor Scale:

4

Very High

3

High

2

Moderate

1

Low

Composite Rank

Habitat Value

Scenic Value

Regional Recreational Potential

Tiburon Ridge	11	3	4	4
Northridge	11	3	4	4
Upper Hidden Valley	10	2	4	4
Heerdt Marshlands	9	4	3	2
Muzzi Marshlands	9	4	3	2
Triangular Marsh	8	4	2	2
Site E of Triangular Marsh	8	4	3	1
Railroad ROW	7	1	2	4
Muzzi Filled Lands	6	1	2	3
Heerdt Filled Lands	6	1	2	3
Corte Madera Creek Site	6	2	2	2
Site West of All Faiths Church	5	1	3	1
Koch Site	4	1	1	2
Menke Park	4	1	2	1

TABLE 3
OPEN SPACE FUNDING SOURCES

SITE	FUNDING SOURCE										
	Special Assessment District	Town General Funds	Tax Increment Bonds	General Obligation Bonds	Real Estate Transfer Tax (Proposed)	County Open Space District Funds	California Natural Habitat and Ecological Preserve Program	California Park & Recreation Bonds	Federal Land & Water Conservation Funds	Federal Wildlife Restoration Funds	Federal Marine Protection Act Funds
Site E. of Triangular Marsh		○		●	○						○
Site West of All Faiths Church		○		●	○						○
Muzzi Filled Lands		○	●	○	○	●	○	○	○		○
Heerdt Filled Lands				●	○	●	○	○	○		○
Corte Madera Creek Site		○		●	○						
Menke Park		○		●	○				○		
Koch Site		○		●	○						○
Tiburon Ridge	●					●			○		○
Northridge (including Wara Lara)	●			○		●			○		○
Railroad ROW	○			●	○				●		○
Upper Hidden Valley	●			○		●					
Muzzi Marshlands			●	○		●	○		○	○	○
Triangular Marsh				●			○			○	○
Heerdt Marshlands				○		●	○		○	○	○

● Major Sources
○ Alternative Sources

HOUSING ELEMENT
TOWN OF CORTE MADERA

Adopted September 29, 1981

Amended May 7, 1985

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PREFACE

The Corte Madera Housing Element adopted in September 1981 represented the combined effort of the Corte Madera Citizens Housing Committee; the Town's planning staff; and Lynn Sedway & Associates. To facilitate public input, the consultant (Lynn Sedway & Associates) prepared two background reports on local housing issues and housing programs prior to the preparation of the Draft Housing Element. After comments had been received from the state, members of the public, Planning Commission and Town Council, the final element was prepared.

The input of the Citizens Housing Committee, and community residents in general through the public hearing process, was most beneficial and appreciated.

This Housing Element was updated in August through November, 1984, to reflect new population and housing data, and to evaluate the 1981 policies in terms of their effectiveness. Updated material has been incorporated into the text as appropriate.

NOTE: Revisions are marked with an "R" in the right-hand margin.

CORTE MADERA HOUSING ELEMENT

PURPOSE

The housing element of the general plan provides a set of guidelines governing residential development and preservation within the community. The guidelines included herein are based upon an analysis of the housing needs of both Town and regional residents.

Corte Madera is a small town with a distinct neighborhood orientation. The housing element is intended to preserve the character of the community while encouraging a population which is diversified in terms of economic and social background.

Corte Madera will soon be almost entirely built out. The development of the Town's remaining sites should reflect the needs of families unable to obtain housing because of unusually high prices and interest rates.

Corte Madera's housing goals include:

- The expansion of affordable housing opportunities.
- The development of a diversity of rental and ownership housing of different types and costs.
- The retention of rental housing, particularly that affordable to low- and moderate-income families.
- The availability of means enabling existing residents to preserve and improve their homes.
- The maintenance of both high standards of quality for the natural and man-made environment for all residential developments, and a sense of community identification through the preservation of the wooded character of the Town and the natural appearance of the surrounding hillsides and ridges.
- The limitation of residential development in areas where hazards to life and property exist.
- The promotion of equal housing opportunity for all citizens.
- The reduction of energy costs by encouraging the use of energy-conserving techniques in existing homes and new construction.

CITIZEN PARTICIPATION

Citizen involvement in the formulation of policies and programs set forth in the Housing Element was substantial. The following items serve to illustrate an open process in which the ideas of residents of all economic segments of the community were given full consideration:

- The 1981 Draft Housing Element as well as background papers on housing issues and programs were reviewed by a Citizens Housing Committee which included renters as well as owners.
- Three joint workshops between planning staff, Town Council, Planning Commissioners, and community residents were held to derive the desired contents of the 1981 Element before and after a draft was prepared by the consultant, Lynn Sedway & Associates. Notices of these workshops were sent to residents of all apartment buildings within the community to assure full public notification.
- The consultant was present at several public hearings in 1981 and 1984 to respond to questions by citizens as well as local officials.
- The Ecumenical Association for Housing, Marin Legal Aid Society, the Builders Exchange, residents of apartment houses, and other interested groups were notified of all public hearings in both 1981 and 1984.
- Informal articles on issues surrounding the Housing Element were published by the Twin Cities Times and the Independent Journal in 1981 and served to increase public awareness of the process.
- The updated Housing Element was reviewed at two public hearings before the Planning Commission and at one before the Town Council.

LEGAL REQUIREMENTS

California state law mandates that every California city and county adopt a housing element in its general plan that, "shall make adequate provision for the housing needs of all economic segments of the community". (Government Code 65302(c))

General plan elements must "comprise an integrated, internally consistent and compatible statement of policies for the adopting agency". (Government Code Section 65300.5.) This legal requirement indicates that all elements of the general plan have equal legal status.

In 1977, the California Department of Housing and Community Development (HCD) adopted regulations specifying new housing element guidelines (authorized through Health and Safety Code Section 4134 and Government Code Section 65302(a)). These guidelines were technically "advisory" to local governments.

However, Assembly Bill (AB) 2853, passed in 1980, set in statute all of the requirements contained within the 1977 HCD guidelines. This provision of AB 2853 (Government Code Section 65585) became effective October 1, 1981.

State law requires that housing elements address not only the needs of existing and probable future residents, but also "the locality's share of the regional housing need" (Government Code Section 65583). To this end, a fair share allocation plan for the Bay Area has been prepared by ABAG which assigns each locality a responsibility for accommodating the housing needs of all income levels in the greater market area. Section 65583 requires that communities attempt to address the needs of these households through the programs and policies contained within their housing elements. However, because the fair share figures do not reflect economic realities, it may not be possible to meet these goals.

Corte Madera's housing element is consistent with the statutory requirements for housing elements, and reflects a comprehensive attempt to address local and regional needs as limited by market and environmental constraints.

A copy of the State Housing Element law is included as Appendix A to clarify the requirements for this Element and its periodic updates.

POPULATION AND HOUSEHOLD CHARACTERISTICS

Corte Madera is a stable, family oriented community of 8,429 residents in 3,450 housing units.¹

Demographic changes since 1970 tend to reflect the maturation of many of the young families which purchased homes in the 1950's and 1960's, rather than an influx of new population groups. The average household size in Corte Madera declined from 2.95 to 2.49 persons in the last decade primarily as the result of a declining proportion of school age children in the population. An additional, less significant factor was the general lifestyle preference for smaller households. The magnitude of this change is close to that for Marin as a whole over this period, which registered a decline from 2.90 to 2.36 persons per household (see Table 1).

Table 1

HOUSEHOLD SIZE

	<u>Corte Madera</u>	<u>Marin County</u>
1970	2.95	2.90
1980	2.49	2.36
1985 (projected)	2.44	2.47
1990 (projected)	2.35	2.40
1995 (projected)	2.26	2.33
2000 (projected)	2.17	2.25

Sources: 1970 - U.S. Census
1980 - Neighborhood Statistics Program
1985 - 2000: ABAG Projection '83

The number of one person households ranged from 8.6% in the North Paradise area to 35.1% in the Baltimore Park/Town Park neighborhood. Families with six or more members ranged from 1% in the Meadowsweet/Madera Park neighborhood to 3.2% in the North and South Paradise neighborhoods.

About 16 percent of all families were headed by women (380 total). Eleven people resided in group quarters, in three facilities for the developmentally disabled.

The maturation of the population is also reflected in its age structure. Between 1970 and 1980, the number of children 14 and under declined by 50%, while residents over 65 increased by 38%. The average age of the population increased from 33.0 to 36.0 years (see Table 2).

1. Source: 1980 Neighborhood Statistics Program

Table 2

AGE STRUCTURE

<u>Age Group</u>	<u>1970</u>	<u>1980</u>
4 and under	7.7%	4.1%
5-9	9.8	5.2
10-14	15.4	7.4
15-19	7.7	8.8
20-24	5.5	6.4
25-34	13.9	16.5
35-44	15.5	16.1
45-54	14.1	13.6
55-64	9.4	11.9
65+	7.1	10.0
	<u>100.0%</u>	<u>100.0%</u>

Source: 1970 Census and 1980 Neighborhood Statistics Program.

Corte Madera's population actually declined slightly between 1970 and 1980 in spite of an increase in dwelling units. It was anticipated that if the 1980 household size of 2.49 were maintained, and a total of 270 units had been added to the housing stock between 1980 and 1985 (per ABAG's projections), a population growth of over 650 would have occurred by 1985. In actuality, through January 1985, only 36 new units had been built. It appears that another 40 units will be constructed by the end of 1985, for a total of 76 new units, and 3,505 total housing units. Using the 1980 household size, a population of 8,727 would be projected for 1985. Using the 2.44 size projected by ABAG, for 1985, the population would be 8,552 (see Table 3).

Table 3

POPULATION ESTIMATES AND PROJECTIONS (1970-1900)

<u>Year</u>	<u>Corte Madera</u>	<u>Urban Service Area</u>	<u>Marin Co.</u>
1970	8,464 ^a		
1980	8,429 ^b	8,368	222,568
1985	8,550 - 8,730 ^c	8,900	226,500
1990		9,300	232,900
1995		9,400	240,200
2000		9,100	245,250

Notes: ^a1980 Corte Madera Housing Element - does not include Meadowsweet.

^b1980 Corte Madera population from Neighborhood Statistics Program (1980 Census data).

^c1985 population derived by applying 1985 and 1980 household size to 1985 projected households.

Projections for Urban Service Area from ABAG:
Projection '83.

INCOME CHARACTERISTICS

The middle class character of Corte Madera has not altered substantially over the past decade. The Corte Madera median household income is considerably higher than the Bay Area (San Francisco/Oakland Standard Metropolitan Statistical Area) median figure and slightly higher than the Marin County index. Most Corte Madera households had incomes close to the median figure of \$25,595, with smaller proportions of poor and wealthy households than neighboring Larkspur and Mill Valley.¹ Table 4 presents the distribution of 1970 and 1980 Corte Madera annual incomes.

<u>1. 1980 Percent of Households</u> <u>With Incomes Below \$10,000</u>		<u>1980 Percent of Households</u> <u>With Incomes Above \$50,000</u>	
Corte Madera	11.4%	Corte Madera	11.8%
Larkspur	15.8%	Larkspur	18.7%
Mill Valley	13.0%	Mill Valley	18.5%

Source: Urban Decision Systems (numbers may vary from Census figures).

Table 4
Corte Madera Household Income

<u>Household¹ Income</u>	<u>1970 Census Percent</u>	<u>1980 Census Percent</u>
Less than \$ 5,000	12.6	4.6
\$ 5,000 - \$ 7,499	10.2	3.4
\$ 7,500 - \$ 9,999	10.8	3.4
\$10,000 - \$ 14,999	26.2	11.4
\$15,000 - \$ 19,999	23.9	10.9
\$20,000 - \$ 24,999	8.2	14.5
\$25,000 - \$ 34,999	5.7	22.6
\$35,000 - \$ 49,999	1.8	17.4
\$50,000 or More	0.7	11.8
Corte Madera Median \$	\$13,164	\$25,595
San Francisco/ Oakland SMSA Median \$	\$ 9,757	\$21,068

The proportion of low income households¹ in Corte Madera increased slightly between 1970 and 1980, from 22.4 percent to 26.8 percent. The percentage of moderate income households² also increased from 19.9 percent in 1970 to 21.4 percent in 1980. There is not a great deal of variation in income by neighborhood (see Table 5).

1. Low income households earn 80 percent or less of the median income for the San Francisco-Oakland SMSA. In 1970, low income households earned \$7,806 per year or less; in 1980, they earned \$16,854 or less.

2. Moderate income households earn 80 to 120 percent of the median income for the San Francisco-Oakland SMSA. In 1970, moderate income households earned \$7,806 or \$11,708 per year; in 1980, they earned \$16,854 to \$25,282 or less.

TABLE 5
HOUSEHOLD INCOME BY NEIGHBORHOOD

	<u>Under</u> <u>\$7,500</u>	<u>\$7,500</u> <u>25,000</u>	<u>Over</u> <u>\$25,000</u>	<u>Median</u> <u>Income</u>
Baltimore Park Town Park	7.6%	47.0%	45.4%	\$22,963
Christmas Tree Hill/ Chapman Park	11.7	39.4	48.8	24,306
Madera Gardens and North	4.6	45.4	50.0	25,000
Meadowsweet/ Madera Park	13.9	47.6	38.4	20,000
North Paradise	7.2	32.0	60.7	28,500
<u>South Paradise</u>	<u>3.8</u>	<u>33.9</u>	<u>62.3</u>	<u>28,936</u>
Corte Madera Total	8.0%	40.3%	51.7%	\$25,595

Source: Neighborhood Statistics Program, 1980.

In 1980, families¹ earning less than \$7,412 (poverty threshold for four-person family) totaled 61 families, or 2.6% of all families. Elderly persons (over 65) below poverty level totaled 29, or 3.5% of all elderly. (Source: 1980 Neighborhood Statistics Program).

LENGTH OF RESIDENCE

Corte Madera has proved to be a stable community since its rapid expansion in the 1950's and 60's. From four to six percent of the Town's ownership units were sold each year between 1970 and 1980 (an average of 5.25 percent), approximately equal to the fairly low County-wide average. The rate has declined significantly since 1980 to two percent.

1. Families earn more income than all households, who include unrelated individuals. Information re: poverty status is not available for all households or for unrelated individuals.

Residential stability is further confirmed by census data on the duration of residence (see Table 6). In 1970, one-third of Corte Madera homeowners had lived in their homes at least ten years. By 1980, over half of all homeowners had lived in their homes for over 10 years. The tenure of renters also increased substantially from 1970 to 1980.

TABLE 6

NUMBER OF YEARS IN UNIT

HOUSEHOLDS OWNING THEIR UNITS

	<u>1980 Percent</u>		<u>1970 Percent</u>
	7.8%	15 months or less	10.3%
	20.2%	2 - 5 years	32.7%
	18.7%	6 - 10 years	23.6%
	53.3%	11 years or more	33.4%
Total	<u>100.0%</u>		<u>100.0%</u>

HOUSEHOLDS RENTING THEIR UNITS

	<u>1980 Percent</u>		<u>1970 Percent</u>
	42.8%	15 months or less	47.2%
	35.2%	2 - 5 years	40.9%
	9.8%	6 - 10 years	8.0%
	12.2%	11 years or more	3.9%
Total	<u>100.0%</u>		<u>100.0%</u>

Source: 1970 Census
1980 Neighborhood Statistics Program

In 1980, people living in the neighborhood north of Paradise had the longest tenure; Meadowsweet area residents, many of whom live in apartments, had the shortest tenure.

ETHNICITY

The minority population of Corte Madera increased slightly after 1970 when the Town was 97.3 percent white and less than 0.4 percent black. The 1980 Census reports that the Town is now 95.2 percent white, 3.6 percent Asian, and 0.9 percent black. A total of 4.0 percent of the population is of Spanish surname and may be of any race.

CHARACTERISTICS OF THE HOUSING STOCK

In July 1984 there were 3,493 housing units in Corte Madera: 2,576 in single family homes, 256 in two- to four-unit structures, and 661 units in five or more unit structures. Of these, approximately 80 were "second units" in single-family homes.

- Multifamily Housing - In 1980, the vast majority of multifamily properties in Corte Madera were rentals. Only two of the multifamily projects containing five or more units were condominium developments. However, almost all of the housing proposals in Town since 1980 have included condominiums or townhouses.

Most of the larger rental projects were developed in the 1960's and are clustered west of the 101 interchange near Tamalpais Drive and near Town Hall. The major exception is the 126 unit Uplands Apartments lying at the end of Paradise Drive. The 1981 Housing Element found 76 second units, many of which were legal non-conforming.

- Single Family Housing - Many of the oldest homes in Corte Madera lie south of Tamalpais Drive and west of Town Park. These homes tend to be individually unique and smaller than average in size. Most of the subdivision homes lying west of U.S. Highway 101 were constructed in the 1950's and are also smaller than average in size.

Homes built more recently tend to be larger, including both subdivision homes east of Highway 101 and custom homes on Chapman Hill. The high median number of rooms (5.5+) per owner occupied unit in Corte Madera in 1980 reflects the preference for larger households prevalent during the late 1950's and 1960's when the Town experienced its greatest growth.

- Subsidized Housing - In 1981, there were 17 subsidized units in Corte Madera. As of July 1, 1984, there were 34 such units in the Town, as shown in Table 7.

TABLE 7
SUBSIDIZED UNITS IN CORTE MADERA

<u>Type</u>	<u>1981</u>	<u>1984</u>
Section 23	1	not reported
Section 8, new construction	0	0
Section 8 Existing	14	13
Rebate for Marin Renters Program	2	11
Below Market Rate Units	<u>0</u>	<u>10</u>
TOTAL	17	34

○ Tenure and Vacancy Rate - In 1980, 67.3% of dwellings were owner-occupied; 69.2% of dwellings were owner-occupied in 1970. In 1970, 215 single-family homes were rented out; by 1980, this had increased by 47 percent to 317 homes.

The 1980 Neighborhood Statistics Program showed that the Town's vacancy rate for all units was 2.0 percent. Two percent of rental units and 1.1 percent of owned units were vacant; another 0.6 percent of the total housing stock was vacant but not for sale or rent. A September 1980 survey by the Federal Home Loan Bank Board showed a vacancy rate of 1.7%.

THE HOUSING PROBLEM

IMMEDIATE NEEDS AND PROBLEMS

The Affordability and Availability of Housing

- Home Ownership Opportunities - The high price of housing in Corte Madera is a critical housing issue. Although housing is somewhat less expensive in Corte Madera than for Marin County as a whole, prices have soared beyond the affordable limit for most buyers. Table 8 depicts how prices have risen in Corte Madera over the past decade relative to median income.

TABLE 8
HOUSING COSTS (1970-1984)

<u>Year</u>	<u>No. Homes Sold</u>	<u>Average Price</u>	<u>Required Income to Purchase</u>	<u>% of Corte Madera Population who Could Purchase the Average-Priced Home</u>
1970	88	\$ 36,635.	\$ 13,500	50% +
1972	112	41,975.	16,000	
1974	107	50,630.	19,000	
1976	165	66,495.	25,800	
1978	141	96,425.	40,500	
1980	85	156,942.	75,000	3.3%
1981	47	162,441.	80,000	
1982	63	160,426.	80,000	
1983	83	163,832.	80,000	

Source: Marin County Board of Realtors.

The price of the average home sold in Corte Madera in 1980 was well over four times higher than the average price in 1970. The most rapid price escalations occurred between 1976 and 1980, with a 135 percent increase over this period.

Moderate income families seeking to buy their first home in Corte Madera in 1983 found few opportunities given an average sales price of over \$163,000. Given prevailing 1984 interest rates of 15 percent, a moderate income family of three with an annual income of \$36,720 (120 percent of the average Bay Area family income¹), could afford to pay no more than \$75,625 for a home.² Low income families (of three persons) with annual incomes below \$24,480 had no opportunities to

1. Based on the 1983 median Bay Area family income of \$30,600 for a family of three as estimated by the Department of Housing and Urban Development.

2. This assumes a level payment 30-year mortgage loan of \$60,500, 80 percent of the \$75,625 affordable price.

become homeowners. The maximum affordable price for families in this income category was \$50,375 in 1983, far below the most inexpensive homes available on the market.

The present situation represents a radical departure from the housing economics of the recent past. A family desiring to purchase a home in Corte Madera in 1976 could readily obtain 9.5 percent financing on a home loan. After making a 20 percent downpayment, the home mortgage payments for the average home, sold for \$66,495, would equal \$450 per month. A family with an annual income as low as \$18,000 could have qualified for a mortgage under those terms.

By 1983, few first time buyers could consider purchasing market rate housing in Corte Madera. To purchase a home priced at \$163,000 at 15 percent interest rates, a family was required to have a minimum annual income of \$80,000. The income required to purchase an average home in Corte Madera therefore increased 344 percent in only seven years.

These examples highlight the impact of escalating prices and high interest rates. In fact, however, few purchases were made in 1983 using conventional financing. Rather, sellers financed portions of the purchase, and/or existing lower rate mortgages were assumed with the result that housing became affordable to buyers with lower incomes. Legislation passed in 1983 restricted "creative financing" based upon the assumption of existing mortgages, however, and increasing numbers of potential buyers may be prevented from purchasing homes.

- Rental Opportunities - Renters receive none of the benefits of home price appreciation. Although rents have not increased nearly as fast as home prices in Corte Madera, they may have marginally outpaced income increases. In 1970, Corte Madera rents averaged \$183 per month.¹ Rents for one bedroom units in 1980 generally ranged between \$350 and \$460 a month, and for two bedroom units \$400 to \$560 a month. By 1984, these prices had risen to about \$500 to \$650 per month, a 270 percent increase over the 1970 median rent. Between 1970 and 1980 median household income increased only 94 percent.² Rents were even higher in the larger apartment complexes, where a 1984 survey showed rents averaging \$675 a month.³

Census data indicates that the Town has approximately 358 low-income renter households (see Table 9). A survey of the Town's rental properties suggests that no more than 25 percent (205 units) of the Town's rental units rent at prices affordable to low income households. An unknown percentage of

1. U.S. Bureau of the Census, 1970.

2. Apartment Complexes surveyed included Madera Village Inn, Madera Valley Apartments, Marin Gardens, and the Uplands.

3. 1980 Census.

these units affordable to low income households are rented by people with higher incomes, indicating that fewer than 205 affordable units are available to Corte Madera's low income renters. In addition, a large percentage of moderate income renters may be overpaying, particularly those renting single-family homes or three-bedroom, multifamily units. Close to one-half of Corte Madera renters were estimated in 1981 to be paying over 30 percent of their gross income towards rent.

TABLE 9
OVERPAYING LOW-INCOME RENTERS (1980)

<u>Income</u>	<u>Number</u>	<u>Percentage of Renter Household in Income Category who are Overpaying</u>
Below \$5,000	65	100%
\$5,000 to \$9,999	114	100%
\$10,000 to \$14,999	134	74%
\$15,000 to \$16,855*	45	95%
Total	358	

*\$16,855 is equal to 80% of SMSA median income. Figures prorated, and are estimates only. Only 21 percent of renter households earning more than \$20,000/year are overpaying.

Source: Marin County Planning Department, derived from 1980 Census materials.

It is extremely difficult for prospective renters to locate an available unit in Corte Madera. The low level of new rental production combined with an increased demand for units caused rental vacancy rates in Corte Madera to drop from 6.3 percent in 1970 to 1.7 percent as of September, 1980.¹ Only 12 multifamily building permits were issued in the Town between April 1970 and April 1980. More projects were approved between 1980 and 1984, but these all included ownership units rather than rental units. Only second-unit production provides new rental housing, but at a slow rate; only 6 new units have actually been built since the Town legalized them in 1978. Another 6 have been legalized.

Condition of the Housing Stock

Over 800 single family homes in Corte Madera are now over thirty-five years old (see Table 10). Over 70 percent of homes are between 24 and 44 years old. Some of the Town's housing stock is

1. U.S. Bureau of the Census, 1970; and Marin County Housing Vacancy Survey, Federal Home Loan Bank Board, September, 1980.

beginning to show signs of age, and an increasing number of units may be in need of rehabilitation.

TABLE 10
AGE OF HOUSING

<u>Age</u>	<u>Year Built</u>	<u>Number</u>	<u>Percent</u>
Under 4 years	After 1980	35	1.0
5-14.9 years	1970-1980	173	5.0
15-24.9 years	1960-1969	1237	35.4
25-34.9 years	1950-1959	1237	35.4
35-44.9 years	1940-1949	294	8.4
over 45 years	before 1940	<u>517</u>	<u>14.8</u>
TOTAL		3493	100.0

(Source: Neighborhood Statistics Program, updated with building permit data)

The 1971 Annual Housing Survey reported that only 2.8 percent of the Town's units were substandard. The 1980 Census showed eight substandard housing units without complete plumbing facilities for exclusive use. The Neighborhood Statistics Program showed 44 units without complete kitchens. A review of 1981-1984 resale inspection reports indicated that as many as 10 to 15 percent (349-408) of the single family homes in Corte Madera may be in need of minor rehabilitation.

The winter storms of 1982 and 1983 created some structural problems for a few hillside homes, and caused flooding in many homes in low-lying areas such as Marina Village and Madera Gardens, where 97 homes were flooded. Reductions in property values due to flooding are estimated to total \$21,700 per house.

Despite these problems, however, the overall condition of the housing stock is good. It is estimated that there are 44 substandard units, 408 units needing minor rehabilitation, and perhaps an additional 100 homes which are subject to flooding.

The Marin County Housing Authority (MCHA), has issued 22 rehabilitation loans totalling \$256,000 for Corte Madera homes, more than for any other community in Marin. This program, however, is only available to low income homeowners.

Moderate income homeowners in Corte Madera are ineligible for subsidized rehabilitation financing and confront high interest rates for home improvement loans. Many may find prevailing loan terms prohibitive and are therefore forced to defer maintenance. Eventually such homeowners could be forced to sell their units and be displaced from the Lower Ross Valley.

Overcrowding

The 1980 Census indicates that a total of 68 households housing 214 persons were overcrowded (with more than 1.01 persons per room), down from 82 such households in 1970. This represents a decline from 2.9% of households to 2.0% of households and indicates that overcrowding is not a major problem in Corte Madera.

Energy Conservation Issues

Affordable energy is an essential component of affordable housing. Energy costs to the consumer have increased 100 percent over and above inflation since 1970 while crude oil prices have increased more than 500 percent. Houses built after 1975 use about half as much energy as a result of California state conservation standards. Houses built after January 1, 1982, will use about 25 percent of the energy used by pre-1975 houses due to an updating of the standards.

For new housing, then, state conservation standards, implemented as part of the Building Code under Title 24, substantially reduce the cost of energy for homeowners. However, more than 95 percent of the Town's housing stock was built before 1975 and may experience high energy costs.

Special Needs

The HCD guidelines encourage communities to analyze the special needs of the elderly, minorities, and the handicapped in their housing elements. This section summarizes available information as to the needs of these groups.

- o The Elderly - The most recent data on the number of elderly residents in Corte Madera comes from the 1980 Census. In Corte Madera, 839 residents, 10.0 percent of the population, were aged 65 or over, as compared with 602 residents (7.1 percent of the population) in 1970.

There is no statistical information differentiating between elderly households which own and rent. Presumably the vast majority of the Town's elderly households own their homes. It appears likely, therefore, that Corte Madera does not confront as serious a housing problem for its elderly renters. However, 29 elderly persons (3.5 percent of all elderly persons) had incomes below the poverty level.

- o Minorities - The Town's minority population is extremely small. Less than five percent of the total population is non-

white, and less than one percent is black. As this population is dispersed throughout the community, the needs of minorities are difficult to assess.

- o Female Heads of Household - The 1980 Neighborhood Statistics Program showed a total of 380 families with a female head. Of these households, 34 had household incomes below the poverty level, and all of those had children under 18 years of age. No census data exists to correlate these numbers with those overpaying for housisng, but it is expected that at least those families with income below the poverty level are having significant problems in obtaining affordable housing in Corte Madera. A substantial percentage of the low-income families receiving rehabilitation loans had a female head.
- o Homeless - The homeless population has dramatically increased in many communities, but there has been no noticeable homeless group in Corte Madera. Because Corte Madera is not on major public transit routes and provides no services or shelters for the homeless, there is little to attract such persons to the community. The County of Marin estimates that there are approximately 200 chronically homeless persons in the County, with the greatest concentration in San Rafael, where some temporary shelters and a soup kitchen are provided.
- o Large Families - The Town's existing large families are concentrated in the North and South Paradise neighborhoods, east of the freeway, where many of the larger homes are located. Increasing housing prices generally makes it difficult for new families needing larger homes to find housing in the Town.
- o The Handicapped - The 1980 Neighborhood Statistics Program indicated that 247 persons between the ages of 16 and 64 (4.0% of the 16-64 population) reported they were temporarily or permanently disable to the extent that they were unable to work, or were limited in the type of work they could do. Seventy-three elderly persons (8.9% of the elderly population) reported they were disabled, for a total of 320 persons.

Correlation of the disabled population with income levels is not available, and thus the degree of need for subsidized housing for the handicapped is unknown.

PROSPECTIVE NEEDS

Population Growth

As outlined in earlier tables, population growth has slowed considerably in the past decade, and continues to do so, in part because not many additional housing units have been built, but primarily because the families and households occupying the existing units have become smaller.

The Town has approved a number of units, but since 1981, 35 new units have been built, 36 are under construction, and another 250 have been approved but are not yet constructed. It is estimated that a total of 76 units will be built in the 1981-1985 period, for a potential population increase of only 120 people because of declining household size.

New Household Formation

New household formation to date should equal the number of new units constructed between 1980 and 1985, less the current vacancy rate. A total of 76 new housing units are expected to be built between 1981 and 1985. Of the new total of 3,505 units, it is estimated that only 2 will be vacant, for a net increase of 74 units.

Employment Growth

New jobs will create additional housing needs. As of 1980, the Town provided a total of 2,628 jobs, of which almost one-third were in retail services.

Table 11
JOBS IN CORTE MADERA - 1980-2000

<u>Sector</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
Agriculture and Mining	22	21	16	11	9
Manufacturing/ Wholesale	405	456	427	495	511
Retail	1148	1264	1401	1482	1586
Services	676	657	820	981	1023
Other	<u>992</u>	<u>1099</u>	<u>1286</u>	<u>1391</u>	<u>1391</u>
TOTAL	3143	3497	3950	4360	4520

(Source: ABAG Preliminary Projections, 3/85)

It is anticipated that the number of jobs in San Francisco will increase by 22,500 between 1980 and 1985, and by an additional 26,100 between 1985 and 1990 (Source: ABAG Projections '83). Marin County employment will also grow rapidly, by 8,184 jobs by 1985 and another 7,800 by 1990. In southern Marin County, 3,200 to 4,400 new jobs are anticipated (see Table 15). ABAG expects Corte Madera's employment to grow by about 650 jobs by 1990, which is somewhat less than the additional employment predicted by project sponsors for the major projects in the Town. The Koch, Hahn and Corte Madera Center expansion projects expect to generate a total of 1,438¹ new jobs, or more than double the 650 expected by ABAG. In either case, the creation of these jobs, as well as those in the County and San Francisco, will create a demand for additional housing in Corte Madera and the rest of Marin County.

1. The Park Place Development EIR (Koch property) estimated that the project will create 272 new jobs. Changes in the development mix reduce this figure to 118 jobs. An estimate based on a 1980 EIR indicated approximately 450 new jobs for the Corte Madera Center. The EIR for "The Village at Corte Madera" shopping center (Hahn site) projects that it will create 870 permanent jobs.

TABLE 12

EMPLOYMENT GROWTH IN THE SOUTHERN MARIN COUNTY URBAN CORRIDOR

Project Anticipated New Jobs

Corte Madera	
The Village at Corte Madera (Hahn retail/commercial development)	870
Corte Madera Center Expansion	355 - 450
Park Place Development (office and industrial portions)	118
Larkspur	
Bon Air	500 - 530
Gamma Project	120 - 130
Creekside Project	80 - 90
Mill Valley	
Alto Center Annex	15 - 35
Shelter Point Project	100 - 125
Urban Project	10 - 20
Sausalito	
Miscellaneous Office Development	<u>1,000 - 2,000</u>
TOTAL	3,168 - 4,420

Fair Share Allocation

The housing policies of a community have regional as well as local impacts. ABAG has established a method to distribute low-, moderate-, and middle-income households among Bay Area communities. ABAG's methodology takes into consideration factors such as the current percentage of low income residents, housing market conditions, access to employment, and available land.

ABAG's methodology allocated 758 units to the Town for the ten-year planning period 1980 - 1990. This number was then reduced by the number of units which will be built between 1980 and 1985. Of the 76 new units expected to be added between 1980 and 1985, ten were intended for moderate income households. The recommended distribution of the remaining 682 units by income categories is shown in Table 13. Appendix B shows ABAG's methodology.

Table 13
HOUSING NEED BY INCOME CATEGORY (1985 - 1990)

	<u>Percent</u>	<u>Number</u>
Percent Low Income	32% (17% very low, 15% low)	243 (129 very low, 114 low)
Percent Moderate Income	20%	142
Percent Above Moderate Income	<u>48%</u>	<u>298</u>
Total	100%	682

Source: ABAG's Fair Share Report

It should be noted that ABAG's calculations do not take into account economic realities. It has not been economically possible for unsubsidized land developers to provide more than about 15% of units for below-market rate families. Actions of local governments to raise the level of inclusionary housing above 15% result in developers being unwilling (and unable) to construct any housing. The limited number of sites capable of accommodating high density development (see Table 14) further limits the number of low-income units that can be produced. However, the State has recognized some of the problems, and allows cities and counties to make a good faith effort towards meeting these fair share allocations.

HOUSING CONSTRAINTS

The development of affordable housing is restricted by market forces and government policies and procedures. This section analyzes these factors and their effect on the production of affordable units.

MARKET CONSTRAINTS

Primary market factors include land, construction and financing costs, the level of effective demand for rental and ownership units, and the availability of developable land.

Supply of Land

Most of the remaining large parcels are scheduled to be developed in the near future. Table 14 presents an inventory of the seventeen remaining sites that have potential for residential development.

As can be seen from the table, the remaining vacant, residentially zoned sites in Corte Madera are "leftover" parcels, most of which have severe environmental constraints (see Table 14). Sites located in hillside areas typically have steep slopes (20 to 50 percent), poor access over substandard roads, and high landslide potential, particularly in East Corte Madera.

Flat sites also have severe constraints. Almost all are underlain by Bay mud and within the floodplain. Many existing houses on similar sites have suffered damage due to flooding and severe structural damage due to differential settlement.

As a result, the supply of land capable of accommodating multifamily development is quite limited. Preliminary approval has already been given for 250 units of multifamily housing (The Habitat (80 units); Park Place (148 units); and The Shores (22 units)). Of the remaining uncommitted sites, only Uplands II, the sites adjacent to Paradise Shopping Center, and certain areas within Meadowsweet and the Village Square area are clearly capable of accommodating multifamily projects. With the exception of infill development in the Village Square area, these sites have a collective capacity of less than 20 acres.

Despite the limited amount of land available for multifamily construction, there probably exists a sufficient number of sites to utilize government subsidies likely to be available during the

time frame of the housing element. In addition, sites exist capable of meeting HUD standards (see Appendix E) for non-market rate housing. A virtual cessation of federal subsidies for new low income projects after 1983 and limited State funding suggests that the community will not be in the position of turning away government housing assistance because it lacks sufficient sites.

TABLE 14
POTENTIAL HOUSING SITES

<u>Site</u>	<u>Acreage</u>	<u>Change in Development Constraints and Potential for Increase in Density</u>	<u>Status from 1981-1984</u>
<u>SITES WHICH ARE VACANT</u>			
Madera del Presidio	85	Steep hillsides with landslide potential; forms an extension of the Tiburon Peninsula Ridge. Rough grading has been done near U.S. 101; site is unattractive, subject to erosion, and used by motorcyclists. Units to be clustered to minimize runoff. Density limited by topography and effects of traffic on adjacent homes. Development to be limited generally to area below elevation 125.	Approval for 152 units has expired.
Hahn	5	While the major portion of the Hahn site is proposed for retail commercial uses, a portion may be used for residences. This could provide housing for some of the people who work in the Center. Special concerns include the soils conditions on the site possible noise from U.S. 101, and relation to the retail commercial area. Suitable for more, small units. (80 units with preliminary approval, including 8 moderate income).	None
Koch	48 (exclud- ing existing building)	A major portion of this site could be suitable for residences. The flatland portion appears most feasible, along with the lower portions (up to elevation 125) of the hillside area. Problems to be considered in any development plan include high noise levels, soils conditions, buffering from the existing industrial building and houses in Marin Estates, and effects of runoff on downstream properties. Suitable for mixed use development. (148 units with final approval, including seven low-income, one moderate income).	Final approvals given; density increased from 132 units.
The Shores	2	There are severe problems of differential settlement on this site. In addition, noise from Lucky Drive, existing marsh vegetation next to the levee, and flood hazards limit the development potential of the site. (22 units with preliminary approval, including two low-income.)	Density increased. Design review application approved.

E	Acreage	Development Constraints and Potential for Increase in Density	Change in Status from 1981-1984
Lands II	15.2	Lower portions of site have already been graded and do not have significant open space value. May be suitable for more small units. Upper portions are part of the Tiburon Peninsula Ridge; high landslide potential; significant grading required. Transition needed between high-density Uplands Apartments and adjacent low-density development in Tiburon.	
Catholic Archdiocese Property	8.7	Former quarry site. Flat portions of site are suitable for development compatible with surrounding single-family homes. Steep slopes have landslide potential. Possible soils problems where site is underlain by Bay mud. Potential for recreational use in association with San Clemente School.	Plan approved for 60 units, 54 low-income. Referendum held 3/5/85, defeated project.
Tiburon Peninsula Ridge (Ring Mountain)	182	Only a small portion of this site is developable. Severe constraints include high landslide potential, steep slopes, low water pressure, rare plants, unique geologic areas, limited road access points, transitional marsh, high visibility.	Has been acquired by Nature Conservancy. No longer a potential housing site.
Tribular Marsh	22	Most of this site is subject to tidal action and cannot be developed. A very small portion next to Paradise Drive has been filled with uncompacted materials and has severe soils constraints. Views of Bay to be maintained and access points to Paradise Drive to be limited. Filled portion to be developed only if public acquisition is not feasible.	Two houses approved.
Meadowsweet	53	Four acres between Casa Buena and Meadowsweet are suitable for multifamily housing. Use of remaining sites is limited by substandard road access, high fire hazard, poor water supply, steep slopes and high visibility.	Several single-family houses approved.
Quarry Meadows	22	Steep slopes hve extremely high debris flow potential, which poses a hazard to developable area. Trail to Northridge to be provided. Development to be of high quality because of high visibility and to be clustered on graded pads. (36 units, including four moderate-income.)	Construction underway
Site Adjacent Paradise Shopping Center	0.5	High potential for rezoning to multifamily residential.	None

	<u>Acreage</u>	<u>Change in Development Constraints and Potential for Increase in Density</u>	<u>Status from 1981-1984</u>
Paradise East	2.2	May be appropriate for a mixed use development, with commercial development shielding residences from Paradise Drive.	None

SITES WITH SOME EXISTING DEVELOPMENT WHICH COULD BE MORE INTENSIVELY DEVELOPED

Village Square		High potential for mixed use development; higher densities possible with smaller units. Existing lower cost housing in the area should be retained.	Preliminary planning started.
Masada	10	Steep slopes, poor access, wooded hillsides, high visibility, and existing house all limit development potential.	None
Villa Madera	5.7	Limited access points and location of existing house limit development potential.	None
Granada School	14 (Total)	Playing fields suitable for residences compatible with surrounding single-family homes; school building may be suitable for elderly housing, a rest home, or a limited-care facility. Granada Park to be retained in its present use. Limited traffic capacity on main access road, El Camino Drive.	School leased for day care, other uses.
Hidden Valley Ranch	3.5	Could be good location for limited multi-family development. Any plan should preserve existing wetlands vegetation.	None
Corte Madera Community Church	3	Access, location of church and parsonage, and slope will limit development potential.	None

Cost of Land

High land costs will continue to be an important factor limiting the development of affordable housing in Corte Madera. Major developable parcels were assessed in 1980 at values generally ranging between \$1.00 and \$5.00 per square foot.

The full cost of land, however, includes land development costs as well. These include raw land purchasing and financing costs, subdivision approval costs, and the cost of clearing, grading and installing services. The remaining developable lots often have difficult soil conditions and are far from sewer, water and other utilities, making land development costs high. In addition, concurrent increases in interest rates, development fees, and average approval periods have increased land holding costs.

Total developable lot costs vary in relation to locational amenities and allowable lot sizes. In 1981 in areas zoned R-1 they tended to begin in the neighborhood of \$50,000 for the minimum 7,500 square foot single family parcel. Recent figures indicate that a price between \$75,000 and \$100,000 for a buildable lot, with all utilities at the frontage, are average. This makes the cost of vacant lots well above those affordable by the moderate income family.

Land costs per square foot increase as allowable densities increase. However, the increase in land costs is rarely proportional to the greater density permitted. For this reason, land costs per unit tend to be lower for multifamily residential construction than for single family homes.

The Marin County Housing Element indicated land costs in 1981 for multifamily housing were about \$8/per square foot. Development in areas zoned R-2 at the maximum allowable density of one unit per 4,000 square feet suggests total land costs per multifamily unit in 1981 ranged between \$30,000 and \$35,000.

There have not been any major transfers of large undeveloped parcels within the Town since 1981, and thus it is difficult to determine what per acre prices are being paid for land without approvals. Certainly there has not been a decline in land value, although inflation in land prices has been at a standstill over the past three years, due to economic recession, high financing costs, and general uncertainty in the real estate market.

Construction Costs

The cost of wood framed housing rose 169 percent between 1975 and 1980.¹ Lumber, concrete and labor costs have risen the most rapidly.

The average rate of construction cost increases does not differ substantially from the overall rate of inflation for this period; rather, the huge increases in home prices over this period has been induced by high demand. Nevertheless, construction cost increases present a formidable obstacle to providing affordable housing.

1981 costs for wood frame, single family, detached homes ranged from \$55 per square foot for minimum amenity styles to more than \$100 per square foot for high quality high amenity units. Costs are similar in 1985. Total construction costs, exclusive of land, are therefore capable of ranging between \$55,000 for a modest 1,000 square foot unit to well over \$200,000 for a 2,000 square foot luxury home.

Construction of apartments and condominium units in low-rise wood frame buildings lies within this range as well. While modest studio units could be built for as low as \$45,000 a unit, excluding land, more attractive family sized units could run over \$100,000 to produce.

Financing

High interest rates have played a critical role in increasing the costs of housing. High land and construction financing costs have made the housing development business inherently more risky. Developers in turn need to realize higher financial returns to justify the risks. Higher required profits as well as costs push up eventual sales prices.

In addition, the home buyer is confronted with some of the highest mortgage interest rates on record. Table 15 charts how monthly mortgage payments differ for a \$100,000 mortgage made at varying interest rates.

1. Equivalent to an annual compounded rate of 11.1 percent. F. W. Dodge Construction Cost Services.

TABLE 15

MONTHLY PAYMENTS - 30 YEARS \$100,000 MORTGAGE

<u>Interest Rate</u>	<u>Payment</u>
9%	\$ 805
11%	\$ 952
13%	\$1,106
15%	\$1,264
17%	\$1,426

Variable rate mortgages with negative amortization provisions are just one example of the new harsher world of credit prospective homebuyers face. Traditional level payment mortgages remain available but at higher interest rates and/or with shorter repayment periods. Financing terms in the 1980's are therefore likely to make housing even less affordable than at present.

GOVERNMENTAL CONSTRAINTS

Local government policies and procedures regulating development affect the availability and cost of new housing. Land controls have the greatest direct impact, but development approval procedures, permit fees, and building codes affect housing costs as well. In addition, federal and state housing policies determine the availability of subsidies important to the development of low and moderate income housing. This section addresses the relation of governmental policies to the Town's ability to address unmet housing need.

Land Use Controls

Of the remaining 416 acres of vacant residentially zoned land, 154 acres were zoned R-2 (permitting densities up to 11 units per acre), 9 were zoned R-1, and 253 (including 182 acres of Ring Mountain) were zoned R-1-A. In addition, the zoning ordinance declares all existing apartments, constructed at densities of up to 40 units per acre, to be conforming units.

Because of the severe environmental constraints, there is realistically only limited potential for increasing the residential density of the remaining residentially zoned parcels. Nevertheless, the Town has permitted density increases for smaller units which do not increase site coverage. In particular, it approved 60 units for the EAH project, where 35 would normally be allowed. However, this density was the subject of a referendum

petition, and on March 5, 1985, the approval was overturned by the voters.

Land zoned for non-residential use also offers the opportunity for more housing. The Town permits multiple family housing in commercial areas at densities exceeding that of the Town's highest-density residential zone. Eighty units were included in the Hahn site, for instance, at a net density of 17 units/acre. As noted in Table 14, other non-residential sites may also offer opportunities for additional housing.

With limited land remaining to be developed, it is unlikely that an increase in allowable densities would of itself significantly reduce the price of new market rate housing. Current market prices reflect an extremely high level of demand in the much broader housing market, and are fairly insensitive to developer's costs.

Local Development Standards

Corte Madera has adopted the Uniform Building Code as its municipal building code. In 1984, only one amendment applies to residences. It requires fire retardant roofs, a water supply meeting ISO (Insurance Services Office) standards, and minimum road widths (12 to 18 feet wide) in areas with high fire hazards (long response times, hazardous brush, poor access and steep slopes). The Town's sewer, storm drain, and other engineering standards conform with Marin County standards, and the Town has required only minimum road widths and improvements in new developments. The Town has adopted a parkland dedication ordinance conforming with State law.

Because of the passage of Proposition 13, declining local revenues, and difficulties in passing general obligation bonds, developers in 1984 were required to fund any substantial off-site improvements needed to serve their projects. These include traffic and flood control improvements and improvements to waste water treatment facilities. Costs may be substantial for individual projects.

Corte Madera encourages development reflecting high architectural standards which complement the Town's natural environment. To this end it has established a design review procedure for proposed site plans and architectural designs. This procedure has helped to assure quality development of the Town's few remaining large parcels.

Costs of the Local Permit Process

Costs associated with the permit process may act as a constraint

to the development of affordable housing. Line item permit costs are related to processing inspection and installation services. They are limited by California law to the cost to the various agencies of performing these services. Appendix C details these costs, which generally range between \$3,000 and \$4,000 per dwelling.

Costs associated with the time it takes to go through development review and building permit processing are more significant. These costs are highly variable and are related to developer overhead, financing and start-up costs, as well as the length of the development review and permit processing period. It has been estimated, however, that on average each year of processing raises construction costs an additional 18 percent.¹

Permit processing tends to significantly delay development when State regulations require the preparation of environmental impact reports (EIR's). Projects necessitating EIR's generally require at least a year of processing and review before construction may begin.

Development on steep slopes necessitates significant review even when EIR's are not required. Single and multifamily proposals in such an instance take three to six months to process.

Small scale proposals consistent with existing zoning and not subject to environmental constraints may be processed in considerably less time.

Federal Policy Constraints

Federal policy affects the development of housing for all economic segments, but it affects the development of low income housing most directly. The Reagan Administration has drastically reduced federal expenditures for subsidized housing. The Department of Housing and Urban Development's (HUD) "Section 8" rent supplement program, the most widely used vehicle in the late 1970's to develop low income housing, may be being phased out. A large number of lesser used but equally workable federal housing development and conservation programs were terminated or cut back as well.

The total amount of funds available for housing has been substantially reduced. The reduced federal commitment to housing has limited the amount of additional low income housing that may be developed in Corte Madera.

1. "Housing Cost Reduction Demonstration", U.S. Department of Housing and Urban Development, December 1980.

An important technique that has been used to make the construction and purchase of housing possible during the recent period of high interest rates has been the use of tax-exempt bond financing. The passage of the Mortgage Subsidy Bond Tax Act of 1980 limited the future applications of this technique, although the Town is participating in both the 1983 and 1985 issues of bonds for the first-time-homebuyers program.

In summation, recent changes at the federal level have critically reduced the number of tools available to local planners and builders for the development of affordable housing.

THE EFFECT OF MARKET AND GOVERNMENT CONSTRAINTS ON HOUSING DEVELOPMENT

Cost and interest rate increases have placed the price of new homes beyond the reach of most Bay Area households.

The minimum costs related to single family home development in Corte Madera are summarized in Table 16.

TABLE 16

ESTIMATED MINIMUM SINGLE FAMILY HOME DEVELOPMENT COSTS - 1981 (1,000 SQUARE FEET)

Hard and soft construction costs	\$55,000
Construction loan interest	2,478
Land costs	45,000
Land financing	4,860
SUB-TOTAL	<u>\$107,338</u>
15% developer profit	16,101
TOTAL COST	<u>\$123,439</u>

It is not possible to produce housing developments at prices affordable to moderate income families. Moderate income families can typically afford to pay no more than \$76,000 for a home. Thus, even units offered "at cost" remain beyond the means of a moderate income buyer with limited equity.

Affordable housing may be provided somewhat more readily given higher densities. The minimum price at which a 1,000 square foot condominium unit may be marketed is closer to the affordable range.

TABLE 17

ESTIMATED MINIMUM
CONDOMINIUM DEVELOPMENT COSTS - 1981

Hard and soft construction costs	\$55,000
Construction loan interest	2,478
Land cost	18,000
Land financing	<u>1,944</u>
SUB-TOTAL	\$77,422
15% Developer profit	<u>11,613</u>
TOTAL COST	\$89,035

It should be noted that both the minimum single family home price and condominium price listed are based upon an assumption of minimal approval periods and are for modest units not typically constructed in Marin today.

Project sponsors have developed a strong economic motivation to build more expensive units of higher quality than in the past due to high land and site costs associated with low density development. Prices commanded for such housing include high profit margins that cannot be matched by profits from moderate and middle income housing developments. Typical construction styles and resulting costs reflect the preferences of these affluent home buyers, as well as the outcome of the design review process.

The conventional development of rental apartments is unprofitable at this time. The favorable balance between construction, land, and financing costs on one hand, and market rents and tax incentives on the other, no longer exists. The possibility of rent control has a further chilling effect on apartment development in the Bay Area.

As a result, no unsubsidized rental units were constructed in Marin in 1980.¹ Moreover, present economic trends indicate that the former favorable balance is unlikely to be restored in the foreseeable future. In the absence of significant new tax incentives or capital and interest subsidies, few, if any, market rent apartments will be developed in Marin between 1981 and 1985. Appendix D, "Hypothetical Apartment Expenses and Revenues", illustrates how major cost and revenue factors in 1981 combined to make investment in apartment construction unattractive. No new rental unit projects were approved or applied for in Corte Madera between 1976 and 1985, except for second units in single-family homes.

1. "Housing Activity Report No. 3", Association of Bay Area Governments, 1981.

A review of the expenses and revenues associated with conventional apartment development points to the discouraging economic realities of low income housing production in Marin County in 1984. To develop apartment projects which can offer rents affordable to low income households a "triple subsidy" is required. Land costs must be written down almost to the point of non-existence; a permanent financing rate must be provided that does not exceed 11 percent; and rent supplements must be made available to tenants from some governmental source. The only alternative to these requirements is substantial capital grants to reduce construction costs to the developer.

It is extremely difficult, although at present not impossible, to solve the low income rental housing equation. The future availability of governmental subsidies in the 1980's at both the federal and State levels is very much in question. Moreover, legal constraints and high interest rates expected to continue in the bond market limit the potential effectiveness of tax-exempt financing techniques. These difficulties diminish the prospects for developing significant amounts of additional rental housing in Corte Madera.

Severe environmental constraints have dictated the need for extensive review of the remaining lands within the Town when development is proposed. Since most of these parcels are surrounded by existing neighborhoods which will be substantially affected by additional development, the public contributes to the review process, and generally lengthens it, as well as insisting that the Town Council reduce densities to reduce impacts on the existing neighborhoods. These factors combine to make it extremely difficult for the Town to reduce processing time or to grant higher densities to compensate for the time delays. The Town does streamline the process as much as possible, especially for projects containing affordable housing in excess of that required by Ordinance. However, the recent successful referendum on the EAH project, which overturned the Town's approval of the 60-unit, moderate-income project, serves to underscore many residents' unwillingness to support higher densities for affordable housing.

EXISTING HOUSING PROGRAMS

PRODUCTION OF AFFORDABLE HOUSING

- Inclusionary Housing Policy - The Town's zoning ordinance was amended in 1983 to require developers of ten or more units to make 10 to 15 percent of all new units available to moderate income buyers. Projects either built or with at least preliminary approval will accordingly provide 19 new housing units affordable to moderate income households¹ and 9 units affordable to low-income households. An additional 54 inclusionary units would have been generated by the EAH project which was defeated in a referendum.

- Second Unit Development - Corte Madera was among the first communities in Marin to encourage the development of second units on parcels with existing single-family homes. Second units are permitted as conditional uses in residentially zoned areas subject to several findings.

A total of 6 new second units have been legally developed in Corte Madera since the adoption of the first ordinance in June, 1978, and another 6 have been legalized. Two units have been approved but not yet built. The ordinance was liberalized in 1983.

- Mixed Use Projects Including Residential and Commercial Development - Corte Madera has made land available for residential development by rezoning.
 - The Koch site has been rezoned to allow the development of 148 units.
 - Eighty units have been included in the Hahn development.
 - Residences are permitted in all commercial zones with a use permit, with no maximum density specified.
- Mortgage Revenue Bond Program. Corte Madera has participated in the First-Time Homebuyers Program to make low-interest loans available to first-time homebuyers.
- Citizens Housing Committee - An ongoing housing committee reviews local housing policy and make recommendations as to

1. Project include Village Green (4 units), Casa Madera (6 units), Hahn (8 units), and Park Place (8 units).

the course of residential development. Local officials will continue to rely on the Housing Committee to provide citizen input into the creation of affordable housing strategies.

THE RETENTION OF AFFORDABLE HOUSING

- Condominium Conversions - In order to retain its existing stock of affordable rental housing, Corte Madera adopted a strict condominium conversion ordinance in 1980. The Town's Municipal Code¹ specifies several conditions that must be met before a conversion application may be approved. Among these conditions are the following:
 - The Planning Commission must find that the vacancy rate for multiple family rental units in the Lower Ross Valley is over five percent.
 - At least 25 percent of the units will be made permanently available to low and moderate income families.
 - The Planning Commission must find that the property owner has not evicted tenants or imposed unusually high rent increases in order to prepare the building for conversion.

Corte Madera has not had any condominium conversions since the early 1970's.

- Limited Equity Cooperatives - Corte Madera permits the conversion of apartment projects into limited equity cooperatives. In distinguishing between such conversions and condominium conversions, the Town recognizes the potential of the limited equity cooperative form of ownership for guaranteeing the long-term affordability of housing.
- Household Assistance - Thirty-four low income households in Corte Madera in 1984 received assistance from the Town and from other programs. Thirteen households leased units through HUD's Section 23 and Section 8 programs. Up to 12 households have received rent supplements through the City/County Rental Assistance Program. There are 10 below-market-rate ownership units.

HUD's Section 23 program has been phased out, and leased units under contract are being converted to the Section 8

1. Corte Madera Municipal Code, Section 18.05.030.

Existing Housing program. The Section 8 program may be cut back or terminated as well. Corte Madera allocated \$5,780 in 1980-81 and 1982-83 to the Rebate for Marin Renters Program (RMR) in order to leverage matching funds from the San Francisco Foundation, for a total of \$17,340 for the fiscal year 1981-82. This program (RMR) has more potential for making the existing rental stock affordable to low income households than any other subsidy vehicle presently available, but it was phased out at the end of 1984 by the San Francisco Foundation. A new application has been made by the County Housing Authority. Average costs of this program range from \$1500 to \$2000 per year per household.

- Housing Rehabilitation - More loans were made through the Marin County Residential Rehabilitation Loan Program in Corte Madera than in any other community. A total of 22 such loans totalling \$256,000 have been made available to Corte Madera low income homeowners. Program activity has been fairly low, however, from the standpoint of the Town's total need for subsidized rehabilitation financing.

The Town requires that a Residential Inspection Report be completed before any residence can be sold and that all life safety hazards be corrected. This ensures that serious code violations are corrected, and encourages sellers and buyers to further improve residential properties.

NEEDS ADDRESSED BY CURRENT HOUSING PROGRAMS

Present housing programs fall short of fully meeting the affordable housing needs of Corte Madera residents. Moreover, present programs and policies only begin to address the Town's fair share responsibility to develop 385 new low and moderate income units by 1985.

Most of the less affluent homeowners in Corte Madera are ineligible for the current rehabilitation programs that are available. The development of a program providing subsidized financing for rehabilitation to moderate income homeowners is essential to the preservation of Corte Madera's single family housing stock.

GOAL AND POLICY IMPLEMENTATION

The implementation of Corte Madera's goals, particularly as they relate to low and moderate income households, requires the adoption of a specific program of public actions. This section sets forth the affirmative steps the Town is to take to meet its housing objectives.

GOAL A - THE EXPANSION OF AFFORDABLE HOUSING OPPORTUNITIES

POLICY A.1: A formal policy will be pursued of requiring a percentage of the units in new housing developments to be sold or rented at prices affordable to low or moderate income households.

IMPLEMENTATION: Continue to implement the Town's inclusionary ordinance, which has the following features:

- All developments of ten or more units are subject to inclusionary requirements.
- Housing developments at densities of six units or less per acre must provide for the sale or rental of a minimum of ten percent of all units at prices affordable to moderate income households.
- Housing developments at densities of more than six units per acre must provide for the sale or rental of a minimum of 15 percent of all units at prices affordable to moderate income households.
- Units sold or rented at prices affordable to low income households may be substituted for moderate income units at the rate of one low income unit for every two moderate income units required.
- A density bonus of two additional market rate units may be given for every low income unit which is proposed, up to a maximum of 15 percent of the maximum permitted density for the project. This density bonus will be considered only if the additional units can be accommodated given environmental, public service, and other constraints.
- If the Town finds that a site is inappropriate for inclusionary units, a developer may pay an in lieu fee to the Town or develop the required units elsewhere in Corte Madera.

- In lieu fees are to equal the difference between the market value of the inclusionary units not developed and the maximum price a moderate income household could afford to pay. The Town should explore the possible use of these in-lieu fees, and should particularly look at the number of units that could be made affordable by in-lieu fees as opposed to including units in new projects.
- Town fees are waived for inclusionary units.

POLICY A.2: The Town will encourage developers to utilize available government programs to ease the financial burden of meeting inclusionary requirements and will continue to participate in the mortgage revenue bond program.

IMPLEMENTATION: Cooperate with the Marin County Housing Development Financing Corporation (MCHDFC) as it investigates funding availability for State and federal housing programs for low and moderate income households, the elderly and the handicapped. Present possibilities include: securing special allocations of tax-exempt financing (mortgage revenue bonds) from CHFA to enable inclusionary sale units to be developed at lower prices and sold at higher prices and to enable developers to participate in the First Time Homebuyers Program.

POLICY A.3: The Town will continue to support the allocation of a significant proportion of Buck Estate funds toward the development of affordable housing in Marin.

POLICY A.4: The Town will continue to promote expeditious processing for low and moderate income housing developments that include more than the required number of low and moderate income units.

IMPLEMENTATION: Give projects priority for scheduling on commission and council agendas, for completion of EIR's, and for staff review.

POLICY A.5: The Town will continue to encourage the development of second units, consistent with the preservation of the character of existing neighborhoods.

IMPLEMENTATION: (1) Continue to implement the streamlined second unit ordinance.

(2) Monitor effectiveness of the ordinance and propose changes as necessary. Monitor rents in new units if feasible.

POLICY A.6: The Town will continue to encourage mixed use concepts which include housing in the development of commercially zoned areas.

IMPLEMENTATION: (1) Encourage selective density increases in the Village Square area to allow more housing as part of a specific plan for the area.

(2) Continue to permit residences as a conditional use in all commercial zones.

POLICY A.7: The Town will continue to support locally acceptable programs which provide financial assistance to low income households seeking to rent existing units.

IMPLEMENTATION: Investigate renewal of local participation in the Rebate for Marin Renters Program. Investigate allocation of matching funds from the San Francisco Foundation for this purpose. If local revenues increase substantially, and Foundation funding is reallocated, renew participation in the Rebate for Marin Renters Program.

POLICY A.8: The Town will discourage the conversion of residential units in commercial uses.

POLICY A.9: Corte Madera accepts those standards of the Department of Housing and Urban Development which are included in Appendix E as determining the suitability of individual sites for non-market rate housing. (Appendix E, HUD Site Evaluation Criteria, details these standards).

POLICY A.10: Explore the possibility of increasing the affordability of the existing housing stock.

IMPLEMENTATION: Study various methods, including shared equity cooperatives, Town participation in acquisition of suitable units, and innovative housing concepts, including shared living space.

GOAL B - THE DEVELOPMENT OF A DIVERSITY OF RENTAL AND OWNERSHIP HOUSING OF DIFFERENT TYPES AND COSTS.

POLICY B.1: The Town will encourage a variety of developmental concepts including the construction of a mix of unit sizes and rental units on the Town's remaining sites.

POLICY B.2: The installation of mobile homes and manufactured housing as required by State law is to remain a permitted use in all areas zoned for single family residential development.

GOAL C - THE RETENTION OF RENTAL HOUSING, PARTICULARLY THAT AFFORDABLE TO LOW AND MODERATE INCOME FAMILIES.

POLICY C.1: The Town will continue to discourage the conversion of multifamily rental units to condominiums as long as a deficiency of rental units exists within the lower Ross Valley.

IMPLEMENTATION: An ordinance controlling condominium conversions was passed in 1980.

GOAL D - THE AVAILABILITY OF MEANS TO ENABLE EXISTING RESIDENTS TO PRESERVE AND IMPROVE THEIR HOMES.

POLICY D.1: Corte Madera shall attempt to annually meet five percent of the estimated rehabilitation need, or, 20 units per year of minor rehabilitation and two units per year of major rehabilitation, through federal, State, and local programs.

IMPLEMENTATION: Encourage rental property owners to utilize the HUD Moderate Rehabilitation Section 8 Program and HCD deferred payment rehab loans as funding becomes available. Increase publicity for the Marin County Residential Rehabilitation Loan Program for low income homeowners.

POLICY D.2: The Town will encourage non-profit sponsors to consider acquiring and rehabilitating smaller rental properties as a way of preserving existing affordable housing.

IMPLEMENTATION: Provide sponsors with the support necessary for them to obtain funding commitments from government and non-governmental (e.g. Buck Estate funds) sources.

POLICY D.3: The Town will make the provision of flood control measures a high priority to protect the condition and value of existing homes.

IMPLEMENTATION: (1) Establish a town-wide assessment district, as supported by the voters, to install the highest priority flood control measures.

(2) Give flood control measures high priority in capital improvements programming.

GOAL E - THE MAINTENANCE OF BOTH HIGH STANDARDS OF QUALITY FOR THE NATURAL AND MAN-MADE ENVIRONMENT FOR ALL RESIDENTIAL DEVELOPMENTS AND A SENSE OF COMMUNITY IDENTIFICATION THROUGH THE PRESERVATION OF THE WOODED CHARACTER OF THE TOWN AND THE NATURAL

APPEARANCE OF THE SURROUNDING HILLSIDES AND RIDGES.

POLICY E.1: Higher density residential development should be concentrated in areas close to major transportation routes and commercial centers, provided that acoustical protection standards are included which sufficiently protect units from highway and traffic noise.

POLICY E.2: Development within existing neighborhoods should be consistent with the character and intensity of adjacent residential uses, as well as with the capacity of the neighborhood to accept such a use.

POLICY E.3: Allowable densities in sloped and ridgeland areas will be limited in relation to the degree of slope and other factors as set forth in the provisions of the zoning ordinance which relate to the Hillside Land Capacity Overlay District.

GOAL F - THE LIMITATION OF RESIDENTIAL DEVELOPMENT IN AREAS WHERE HAZARDS TO LIFE AND PROPERTY EXIST.

POLICY F.1: Development will be strictly controlled in those areas identified in the Seismic Safety Element as subject to ground failure, static settlement, extreme fire hazards or flooding.

GOAL G - THE PROMOTION OF EQUAL HOUSING OPPORTUNITY FOR ALL CITIZENS.

POLICY G.1: Corte Madera supports the Supreme Court decision to prevent discrimination against families with children in the renting of residential units. In addition, the Town will continue to support existing laws prohibiting discrimination in the sale or rental of housing.

IMPLEMENTATION: The Town will provide literature in the Planning Department concerning equal housing opportunity for public review, and will periodically publicize that it does provide such information. It will also maintain a list of agencies investigating fair housing complaints and will refer people to them as needed.

POLICY G.2: The Town encourages the development of on-site recreational facilities for children in new residential projects.

GOAL H - THE REDUCTION OF ENERGY COSTS BY ENCOURAGING THE USE OF ENERGY-CONSERVING TECHNIQUES IN EXISTING HOMES AND NEW CONSTRUCTION.

POLICY H.1: The Town supports existing energy conservation standards and solar access standards for new development as contained in Titles 20 and 24.

POLICY H.2: The Town will explore the development of energy conservation and solar access standards for existing development.

IMPLEMENTATION: (1) Review the Subdivision Ordinance for possible changes that would make energy conserving devices easier to install.

(2) Develop public outreach and information programs to encourage the installation of cost-effective energy conservation measures and solar equipment in conjunction with the Marin County Board of Realtors and Marin County.

GOAL I - INCREASE CITIZEN PARTICIPATION IN HOUSING ISSUES.

POLICY I.1: A Citizen's Advisory Committee on Housing shall have the responsibility:

(1) To annually review implementation of the Housing Element;

(2) To recommend changes in implementation procedures;

(3) To recommend amendments or additions to housing goals;

(4) To recommend new ways to achieve housing goals;

(5) To act as a repository for information in implementing housing goals;

(6) To act as liaison between Corte Madera citizens and the Town Council and Planning Commission on Housing issues;

(7) To prepare an annual report to the Town Council and Planning Commission on the Committee's work, and on vital housing statistics.

IMPLEMENTATION: Continue to support the activities of the Housing Committee.

IMPLEMENTATION SCHEDULE

The vast majority of policies and programs described herein have already been implemented. Table 18 sets forth the Town's implementation schedule and identifies departments and agencies responsible for putting identified programs into effect. The remainder of the programs will be in effect or explored by 1987.

TABLE 18
ANTICIPATED NUMBER OF UNITS
TO BE CREATED, REHABILITATED OR CONSERVED
1985-1990

New Units Created:	
Above Moderate	400
Moderate	40
Low	40
Units to be Rehabilitated	100
Units to Be Conserved	*
Units to be Demolished	5

*Note: Based upon the Town's existing condominium conversion ordinance, it is unlikely that any existing rental units would be permitted to be converted because of the low vacancy rates. Thus, no existing rental units would be lost to condominium use and made unavailable. However, without knowing how many units may attempt to make this conversion, it is impossible to state how many units will have been "conserved". Additionally, the rehabilitation loan program may assist some moderate and low income owners to rehabilitate their homes and conserve them, rather than being forced to sell because they cannot keep up with maintenance of their homes.

REVIEW AND REVISION

State law provides that revised Housing Elements should reflect the results of a review of the existing Element based on all of the following:

1. The appropriateness of the housing goals, objectives, and policies in contributing to the attainment of the state's housing goals and objectives.
2. The effectiveness of the housing element in the attainment of the community's housing goals and objectives.
3. The progress of the city in implementation of the prior housing element.

The Town's review of its existing element indicates that virtually all of the programs suggested by the goals and policies of the 1981 element have been implemented. This has resulted in the creation of a number of new affordable units which would not have existed in this community without the Housing Element's requirements. However, the Town has still not met its goals.

Due to environmental constraints and the lack of available land, there is a limited amount that the Town of Corte Madera can do to achieve the State's overall housing goals. The Town's housing element has pointed out the areas in which the Town can work toward providing more housing, especially in moderate and lower income categories, and in conserving the housing stock which it presently has. Town decisionmakers have responded to the goals and policies outlined in the Element and have required developers to conform to them in order to get projects approved. However, the community's citizens recently voted to overturn the Town Council's approval of a 60 unit low and moderate-income project (EAH).

Table 19 outlines the accomplishments of the Town relative to the specific goals and policies contained in the previous housing element. Most of those policies have been implemented, and more are targeted for the next five year period. It appears that it will be more feasible to attempt to conserve and rehabilitate existing housing than to increase the overall housing stock by large amounts of new construction. Second units may be the only feasible way to develop new rental housing in the community.

TABLE 19

HOUSING ELEMENT IMPLEMENTATION - STATUS REPORT

<u>AND POLICIES</u>	<u>IMPLEMENTATION GOAL</u>	<u>1984 STATUS</u>
The expansion of affordable housing opportunities		
Inclusionary Ordinance	1982	Completed and operational
Priority processing system	1982	Operational, informal basis
Second unit ordinance modification	1982	Complete and operational
Second unit monitoring (new policy)	1987	Not yet started
Village Square specific plan	1986	Friends of Village Square formed to begin plan
Residences in commercial districts	1982	Complete and operational
Rebate for Marin Renters Program	On-going	Program no longer funded as of 12/84; San Francisco Foundation and Town may refund.
Mortgage Revenue Bond Program	On-going	Town has signed cooperation agreement with County for program
Explore alternatives to new construction (new policy)	1990	Not yet started
The development of a diversity of rental and ownership housing or different types and costs		
Land use intensity system investigation	1982-3	System investigated; tabled by Planning Commission
The retention of rental housing, particularly that affordable to low and moderate income families		
Condominium Conversion Ordinance	On-going	In place

GOALS AND POLICIESIMPLEMENTATION GOAL1984 STATUS

The availability of means to enable existing residents to preserve and improve their homes

Curks/Foran program

1982-3

Not operational or funded because of high interest rates

HUD Moderate Rehab, Section 8

1982-3

Determined not feasible

Publicity for County Rehab Program

On-going

Town should increase effort, some effort has been made

Non-profit property acquisitions

On-going

EAH project, on site formerly owned by Catholic archdiocese, had preliminary approvals for 60 units of affordable housing. Project was defeated by March 1985 referendum.

Flood control projects (new policy)

1985-86

Town-wide assessment district and capital improvements program being completed.

The promotion of equal housing opportunity

Possible Town antidiscrimination ordinance for families with children

1982-3

Supreme Court decision made this unnecessary

Town to provide information on equal opportunity laws (new policy)

1985

New

The reduction of energy costs

Energy Committee review

1982

Committee appointed

Outreach and information program

1982

Not done

Possible weatherization ordinance

1982

Defeated by Town Council

ANTICIPATED IMPACTS

The estimation of program and policy impacts is complicated by uncertainty over the continuation of certain State and federal housing programs. In addition, the extent to which the San Francisco Foundation will prove willing to allocate funds from the Buck Estate to help achieve housing goals is unknown at this time. The answers to these questions will affect how successful Corte Madera will be in producing additional affordable housing.

AFFORDABLE HOUSING PRODUCTION

Inclusionary Units

The precise number of affordable units that will be developed will be determined by developer response to density bonuses offered for low income units. Projects with at least preliminary approval as of March 15, 1985, including the Quarry, The Shores, and Park Place, will produce a total of 19 moderate income units and nine low income units. Additional projects that may be completed by 1990 may produce around 30 low and moderate income units.

Household Assistance

Corte Madera has been allocating Town revenues to leverage funds from the San Francisco Foundation for the City/County Rental Assistance Program. An estimated 11 households are receiving financial assistance enabling them to rent existing units within Town. This program was discontinued as of December 1984 due to lack of funding by the San Francisco Foundation, but may be refunded.

Second Units

Second unit production is difficult to estimate. While in the past second units have been developed at a very slow rate in Marin, some of the factors inhibiting their production were modified when the ordinance was streamlined. However, only 14 units were approved between 1978 and 1985. It appears likely that second unit production will not exceed 5 units per year, or 25 additional units by 1990. These units are expected to be offered at rents affordable to moderate income households.

Residential Conversions

Additional units affordable to low income households may be developed through converting portions of existing commercial properties and through non-profit sponsors acquiring and rehabilitating existing residential properties. The potential application for these techniques in Corte Madera is extremely limited.

Housing Conservation

A minimum of twenty units may be expected to receive rehabilitation assistance under the Marin County Residential Rehabilitation Loan Program based upon the past program average of five loans per year. The total number of units that may be rehabilitated between now and 1990 is impossible to predict since most rehabilitation is accomplished privately. Additionally, the Town-wide flood control district will remove the threat of flooding for many areas, which will result in the conservation of housing which might otherwise be damaged or destroyed by flooding.

Governmental Service Costs

Additional development in the Town of Corte Madera will generate needs for additional Town services, including police, fire, public works and planning. It is expected that property tax revenues from residential development, combined with sales tax from new commercial development, including the Hahn Center and the Corte Madera Center expansion, will more than pay for the limited amount of additional services required.

SUMMARY OF IMPACTS

The policies and programs described herein represent a maximum effort to facilitate the development and conservation of affordable housing within Corte Madera. Seventeen low and moderate income units were produced between October 1, 1981, and the beginning of 1985.

Between 1985 and 1990 several projects, which are now approved, but have not yet been constructed, will be built, including a possible total of 55 affordable units.

APPENDIX A
STATE HOUSING ELEMENT LAW

Article 10.6. Housing Elements

65580. The Legislature finds and declares as follows: Legislative policy
- (a) The availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every California family is a priority of the highest order.
 - (b) The early attainment of this goal requires the cooperative participation of government and the private sector in an effort to expand housing opportunities and accommodate the housing needs of Californians of all economic levels.
 - (c) The provision of housing affordable to low- and moderate-income households requires the cooperation of all levels of government.
 - (d) Local and state governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community.
 - (e) The Legislature recognizes that in carrying out this responsibility, each local government also has the responsibility to consider economic, environmental, and fiscal factors and community goals set forth in the general plan and to cooperate with other local governments and the state in addressing regional housing needs.
- (Added by Stats. 1980, Ch. 1143.)

65521. It is the intent of the Legislature in enacting this article: Intent
- (a) To assure that counties and cities recognize their responsibilities in contributing to the attainment of the state housing goal.
 - (b) To assure that counties and cities will prepare and implement housing elements which, along with federal and state programs, will move toward attainment of the state housing goal.
 - (c) To recognize that each locality is best capable of determining what efforts are required by it to

contribute to the attainment of the state housing goal, provided such a determination is compatible with the state housing goal and regional housing needs.

- (d) To ensure that each local government cooperates with other local governments in order to address regional housing needs.

(Added by Stats. 1980, Ch. 1143.)

65582. As used in this article:

- (a) "Community," "locality," "local government," or "jurisdiction" means a city, city and county, or county.
- (b) "Department" means the Department of Housing and Community Development.
- (c) "Housing element" or "element" means the housing element of the community's general plan, as required pursuant to this article and subdivision (c) of Section 65302.

(Added by Stats. 1980, Ch. 1143)

Definitions

65583. The housing element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, and mobilehomes, and shall make adequate provision for the existing and projected needs of all economic segments of the community. The element shall contain all of the following:

Housing Element Content

- (a) An assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. The assessment and inventory shall include the following:

Needs Assessment

- (1) Analysis of population and employment trends and documentation of projections and a quantification of the locality's existing and projected housing needs for all income levels. Such existing and projected needs shall include the locality's share of the regional housing need in accordance with Section 65584.
- (2) Analysis and documentation of household characteristics, including level of payment compared to ability to pay, housing characteristics, including overcrowding, and housing stock condition.
- (3) An inventory of land suitable for residential development, including vacant sites and sites having potential for redevelopment, and an analysis of the relationship of zoning and public facilities and services to these sites.
- (4) Analysis of potential and actual governmental constraints upon the maintenance, improvement, or development of housing for all income levels, including land use controls, building codes and their enforcement, site improvements, fees and other exactions required of

developers, and local processing and permit procedures.

- (5) Analysis of potential and actual nongovernmental constraints upon the maintenance, improvement, or development of housing for all income levels, including the availability of financing, the price of land, and the cost of construction.

- (6) Analysis of any special housing needs, such as those of the handicapped, elderly, large families, farmworkers, and families with female heads of households.

- (7) Analysis of opportunities for energy conservation with respect to residential development.

- (b) A statement of the community's goals, quantified objectives, and policies relative to the maintenance, improvement, and development of housing.

It is recognized that the total housing needs identified pursuant to subdivision (a) may exceed available resources and the community's ability to satisfy this need within the content of the general plan requirements outlined in Article 5 (commencing with Section 65300). Under these circumstances, the quantified objectives need not be identical to the identified existing housing needs, but should establish the maximum number of housing units that can be constructed, rehabilitated, and conserved over a five-year time frame.

- (c) A program which sets forth a five-year schedule of actions the local government is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the housing element through the administration of land use and development controls, provision of regulatory concessions and incentives, and the utilization of appropriate federal and state financing and subsidy programs when available. In order to make adequate provision for the housing needs of all economic segments of the community, the program shall do all of the following:

- (1) Identify adequate sites which will be made available through appropriate zoning and development standards and with public services and facilities needed to facilitate and encourage the development of a variety of types of housing for all income levels, including rental housing, factory-built housing and mobile-homes, in order to meet the community's housing goals as identified in subdivision (b).
- (2) Assist in the development of adequate housing to meet the needs of low- and moderate-income households.
- (3) Address and, where appropriate and legally possible, remove governmental constraints to the maintenance, improvement, and development of housing.

Goals, objectives,
and policies

Implementation
program

- (4) Conserve and improve the condition of the existing affordable housing stock.
- (5) Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, or color.

The program shall include an identification of the agencies and officials responsible for the implementation of the various actions and the means by which consistency will be achieved with other general plan elements and community goals. The local government shall make a diligent effort to achieve public participation of all economic segments of the community in the development of the housing element, and the program shall describe this effort.

(Added by Stats. 1980. Ch. 1143.)

Regional housing
needs

65584. (a) For purposes of subdivision (a) of Section 65583, a locality's share of the regional housing needs includes that share of the housing need of persons at all income levels within the area significantly affected by a jurisdiction's general plan. The distribution of regional housing needs shall, based upon available data, take into consideration market demand for housing, employment opportunities, the availability of suitable sites and public facilities, commuting patterns, type and tenure of housing need, and the housing needs of farmworkers. The distribution shall seek to avoid further impaction of localities with relatively high proportions of lower income households. Based upon data provided by the Department of Housing and Community Development relative to the statewide need for housing, each council of governments shall determine the existing and projected housing need for its region. The Department of Housing and Community Development shall ensure that this determination is consistent with the statewide housing need and may revise the determination of the council of governments if necessary to obtain this consistency. Each locality's share shall be determined by the appropriate council of governments consistent with the criteria above with the advice of the department subject to the procedure established pursuant to subdivision (c).

(b) For areas with no council of governments, the Department of Housing and Community Development shall determine housing market areas and define the regional housing need for localities within these areas. Where the department determines that a local government possesses the capability and resources and has agreed to accept the responsibility, with respect to its jurisdiction, for the identification and determination of housing market areas and regional housing needs, the department shall delegate this responsibility to the local governments within these areas.

(c) Within 90 days following a determination of a council of governments pursuant to subdivision (a), or the department's determination pursuant to subdivision (b), a local government may revise the definition of its share of the regional housing need. The revised share shall be based upon available data and accepted planning methodology, and supported by adequate documentation. Within 60 days of the local government's revision, the council of governments or the department, as the case may be, shall accept the revision or shall indicate, based upon available data and accepted planning methodology, why the revision is inconsistent with the regional housing need. The housing element shall contain an analysis of the factors and circumstances, with all supporting data, justifying the revision. All materials and data used to justify any revision

shall be made available upon request by any interested party within 45 days upon payment of reasonable costs of reproduction unless such costs are waived due to economic hardship.

(d) Any authority to review and revise a local government's share of the regional housing need granted under this section shall not constitute authority to revise, approve, or disapprove the manner in which the local government's share of the regional housing need is implemented through its housing program.

(Added by Stats. 1980, Ch. 1143.)

65585. (a) Each city, county, and city and county shall consider the guidelines adopted by the Department of Housing and Community Development pursuant to Section 50459 of the Health and Safety Code in preparation and amendment of the housing element pursuant to this article. Such guidelines shall be advisory to each local government in order to assist it in the preparation of its housing element.

Housing element
guidelines

(b) At least 90 days prior to adoption of the housing element pursuant to this article and Section 65557, or at least 45 days prior to the adoption of an amendment to this element, the planning agency of a city, county, or city and county shall submit a draft of the element or amendment to the Department of Housing and Community Development. The department shall review drafts submitted to it and report its findings to the planning agency within 90 days of receipt of the draft in the case of adoption of the housing element pursuant to this article, or within 45 days of receipt of the draft in the case of an amendment. The legislative body shall consider the department's findings prior to final adoption of the housing element or amendment.

State review

(c) Each local government shall provide the department with a copy of its adopted housing element or amendments. The department may review adopted housing elements or amendments and report its findings.

Copy

(d) Except as provided in Section 65586, any and all findings made by the Department of Housing and Community Development pursuant to subdivisions (b) and (c) shall be advisory to the local government.

Advisory review

(Added by Stats. 1980, Ch. 1143.)

65586. Local governments shall conform their housing elements to the provisions of this article on or before October 1, 1981. Jurisdictions with housing elements adopted before October 1, 1981, in conformity with the housing element guidelines adopted by the Department of Housing and Community Development on December 7, 1977, and located in Subchapter 3 (commencing with Section 6300) of Chapter 6 of Part 1 of Title 25 of the California Administrative Code, shall be deemed in compliance with this article as of its effective date. A locality with a housing element found to be adequate by the department before October 1, 1981, shall be deemed in conformity with these guidelines.

Deadline for
adoption

(Added by Stats. 1980, Ch. 1143.)

65587. (a) Each city, county, or city and county shall bring its housing element, as required by subdivision (c) of Section 65507, into conformity with the requirements of this article on or before October 1, 1981. No extension of time for such purpose may be granted pursuant to Section 65302.6, notwithstanding its provisions to the contrary.

(b) Any action brought by an interested party to review the conformity with the provisions of this article of any housing element or portion thereof or revision thereto shall be brought pursuant to Section 1085 of the Code of Civil Procedure; the court's review of compliance with the provisions of this article shall extend to whether the housing element or portion thereof or revision thereto reasonably complies with the requirements of this article.

(Added by Stats. 1980, Ch. 1143.)

(c) If a court finds that an action of a city, county, or city and county, which is required to be consistent with its general plan, does not comply with its housing element, the city, county, or city and county shall bring its action into compliance within 60 days. However, the court shall retain jurisdiction throughout the period for compliance to enforce its decision. Upon the court's determination that the 60-day period for compliance would place an undue hardship on the city, county, or city and county, the court may extend the time period for compliance by an additional 60 days.

(Added by Stats. 1980, c. 1143, p. 3697, § 3. Amended by Stats. 1982, c. 1355, § 1; Stats. 1982, c. 1438, § 1.)

62297.1(a) The Legislature finds and declares that local policies and programs which increase housing opportunities through a tax-exempt revenue bond program or through a requirement that the approval of a housing related project be tied to the provision of assistance for housing are consistent with the intent of this article. The Legislature further finds and declares that actions which have the effect of impeding or halting such policies and programs or the direct production of housing run contrary to the goals of increased housing opportunities and balanced commercial and residential development embodied in this article.

(b) Notwithstanding any other provision of law, neither a mortgage revenue bond program subject to subdivision (b) of Section 52053.5 of the Health and Safety Code nor a local approval, made prior to May 1, 1983, of a housing related project shall be invalidated due to the failure or alleged failure of a city and county to comply with this article, subdivision (c) of Section 65302 of the Government Code, or any regulations or guidelines adopted pursuant thereto, or any other provision of law requiring or claimed to require consistency with the housing element of a local general plan. For purposes of this section, a "housing related project" means (a) a residential project or (b) a nonresidential project, the local approval of which was conditioned upon the nonresidential developer (1) developing or rehabilitating or causing to be developed or rehabilitated housing units, or (2) providing funds for the development or rehabilitation of housing units, or (3) investing in a mortgage revenue bond program subject to subdivision (b) of Section 52053.5 of the Health and Safety Code, under a formula or guidelines adopted by the planning commission or

Judicial Standard
of Review

Time for Compliance

Revenue Bond Programs;
Local Approval of
Housing Related
Projects; Compliance
With Relevant Laws

local governing body of the city and county. For purposes of this section, "housing related project" shall not include a project, the construction or development of which requires either the demolition or conversion of low- or moderate-rental residential units and the local approval of which does not provide for the replacement of such units and for the maintenance in such units of rents affordable to low- and moderate-income persons for a period of not less than 20 years.

(Added by Stats.1982, c. 312, § 1, urgency, eff. June 23, 1982.)

65590(a) Each local government shall review its housing element as frequently as appropriate to evaluate all of the following:

Periodic Review and
Revision

(1) The appropriateness of the housing goals, objectives, and policies in contributing to the attainment of the state housing goal.

(2) The effectiveness of the housing element in attainment of the community's housing goals and objectives.

(3) The progress of the city, county, or city and county in implementation of the housing element.

(b) The housing element shall be revised as appropriate, but not less than every five years, to reflect the results of this periodic review, except that the first such revision shall be accomplished by July 1, 1984.

(c) The review and revision of housing elements required by this section shall take into account any low- or moderate-income housing which has been provided or required pursuant to Section 65590.

(d) The review pursuant to subdivision (c) shall include, but need not be limited to, the following:

(1) The number of new housing units approved for construction within the coastal zone after January 1, 1982.

(2) The number of housing units for persons and families of low or moderate income, as defined in Section 50093 of the Health and Safety Code, required to be provided in new housing developments either within the coastal zone or within three miles thereof pursuant to Section 65590.

(3) The number of existing residential dwelling units occupied by persons and families of low or moderate income, as defined in Section 50093 of the Health and Safety Code, that have been authorized to be demolished or converted since January 1, 1982, in the coastal zone.

(4) The number of residential dwelling units for persons and families of low or moderate income, as defined in Section 50093 of the Health and Safety Code, that have been required for replacement or authorized to be converted or demolished as identified in paragraph (3). The location of the replacement units, either onsite, elsewhere within the locality's jurisdiction within the coastal zone, or within three miles of the coastal zone within the locality's jurisdiction, shall be designated in the review.

(Added by Stats.1982, c. 1143, p. 3697, § 3. Amended by Stats.1982, c. 43, § 1, urgency, eff. Feb. 17, 1982; Stats.1982, c. 764, § 1.)

65589 (a) Nothing in this article shall require a city, county, or city and county to do any of the following:

Legal Effect

(1) Expend local revenues for the construction of housing, housing subsidies, or land acquisition.

(2) Disapprove any residential development which is consistent with the general plan.

(b) Nothing in this article shall be construed to be a grant of authority or a repeal of any authority which may exist of a local government to impose rent controls or restrictions on the sale of real property.

(c) Nothing in this article shall be construed to be a grant of authority or a repeal of any authority which may exist of a local government with respect to measures that may be undertaken or required by a local government to be undertaken to implement the housing element of the local general plan.

(d) The provisions of this article shall be construed consistent with, and in promotion of, the statewide goal of a sufficient supply of decent housing to meet the needs of all Californians.

(Added by Stats. 1980, c. 1143, p. 3697, § 3.)

65589.5 When a proposed housing development project complies with the applicable general plan, zoning, and development policies in effect at the time that the housing development project's application is determined to be complete, but the local agency proposes to disapprove the project or to approve it upon the condition that the project be developed at a lower density, the local agency shall base its decision regarding the proposed housing development project upon written findings supported by substantial evidence on the record that both the following conditions exist:

Proposal of
Local Agency
to Disapprove
or Approve
Project on
Condition of
Lower Density;
Written
Findings;
Existence
of Conditions

(a) Each local government shall consider the guidelines adopted by the department * * * pursuant to Section 50459 of the Health and Safety Code in the preparation and amendment of its housing element pursuant to this article. Those guidelines shall be advisory to each local government in order to assist it in the preparation of its housing element.

(b) At least 90 days prior to adoption of the housing element pursuant to this article and Section 65357, or at least 45 days prior to the adoption of an amendment to this element, the planning agency of a local government shall submit a draft of the element or amendment to the department * * *. The department shall review drafts submitted to it and report its findings to the planning agency within 90 days of receipt of the draft in the case of adoption of the housing element pursuant to this article, or within 45 days of receipt of the draft in the case of an amendment. The legislative body shall consider the department's findings prior to final adoption of the housing element or amendment unless the department's findings are not available within the above prescribed time

limits. If the department's findings are not available within those prescribed time limits, the legislative body may take the department's findings into consideration at the time it considers future amendments to the housing element.

(c) Each local government shall provide the department with a copy of its adopted housing element or amendments. The department may review adopted housing elements or amendments and report its findings.

(d) Except as provided in Section 65586, any and all findings made by the department * * * pursuant to subdivision (b) and (c) shall be advisory to the local government.

(Amended by Stats. 1983, c. 1250, p. ----, § 2, urgency, eff. Sept. 30, 1983, operative Jan. 1, 1984)

65589.8 A local government which adopts a requirement in its housing element that a housing development contain a fixed percentage of affordable housing units, shall permit a developer to satisfy all or a portion of that requirement by constructing rental housing at affordable monthly rents, as determined by the local government.

Nothing in this section shall be construed to expand or contract the authority of a local government to adopt an ordinance, charter amendment, or policy requiring that any housing development contain a fixed percentage of affordable housing units.

(Added by Stats. 1983, c. 787, p. ----, § 1.)

Fixed Percent-
age of
Affordable
Housing Units;
Satisfaction
of Requirement
by Construction
of Rental
Housing at
Affordable
Monthly Rents

Revised February 1984

APPENDIX B

ABAG'S METHODOLOGY FOR 'FAIR SHARE' ALLOCATIONS

APPENDIX

TECHNICAL DEFINITIONS AND FORMULAS FOR CALCULATING REGIONAL HOUSING NEEDS

The formulas used to calculate the existing and projected housing need are included in this appendix. The terms used are listed and defined below. The formulas used to calculate housing needs are shown on the next page, followed by an explanation of how the optimal vacancy rate is calculated.

a = vacancy ratio

b + c = housing cost to income ratios

ln = natural logarithm

Aho = available housing units

hh = households = occupied housing units

SR = household size ratio = .8716

hv = median value of owner-occupied units

fi = median family income

rv = median rent of renter-occupied units

fu = unweighted variance factor

fw = weighted variance factor

RVR = Regional Vacancy Rate = .045

AVR = Available Vacancy Rate = $\frac{Aho - hh}{Aho}$

Shc = Shortfall coefficient

OVR = Optimal Vacancy Rate

N_E = Existing Need (1980)

N_G = Growth Need (1980-90)

N_P = Projected Need (1990)

Formulas Used to Calculate Existing and Projected Housing Need

$$a = \frac{(\ln Aho_{70} - \ln hh_{70})}{\ln Aho_{80} - \ln hh_{80}}^{SR}$$

$$b = \frac{\ln hv_{80} - \ln hv_{70}}{\ln fi_{80} - \ln fi_{70}} \times \% \text{ owner hh}$$

$$c = \frac{\ln rv_{80} - \ln rv_{70}}{\ln fi_{80} - \ln fi_{70}} \times \% \text{ renter hh}$$

$$fu = \frac{a + (b + c)}{20} - .1$$

$$fw = fu \left\{ \frac{RVR}{AVR} \right\}$$

$$Shc = \frac{AVR}{AVR + .00225 (a + (b+c)) - .0045}$$

$$Shc = \frac{1}{1 + fw}$$

$$OVR = (AVR)^{Shc}$$

$$N_E = \frac{hh_{80}}{1 - OVR} - Aho_{80}$$

$$N_G = \frac{hh_{90} - hh_{80}}{1 - OVR}$$

$$N_P = N_E + N_G = \frac{hh_{90}}{1 - OVR} - Aho_{80}$$

APPENDIX C

PERMIT COSTS IN CORTE MADERA

Permit costs from site to site can vary substantially depending on site conditions, location, and the type and design of development. In estimating a "minimum" cost to a developer to go through the local permit process in Corte Madera, only the basic permits required of all developments were considered. While the figures derived can give a general indication of permit process expense, it should be noted that the "minimum" cost estimated would probably never be realized by a developer for the following reasons:

(1) Large undeveloped parcels¹ would be subject to such requirements as subdivision review, environmental assessments, engineering inspections, etc.

(2) Many of the remaining lots are of substandard size or are located on steep hillsides. In these situations design review would generally be required.

(3) Much of the remaining developable land is subject to moderate to severe environmental constraints such as steep slopes, underlying Bay mud, and drainage problems. Careful soils, engineering and design studies, reviews and associated permits will be required on a site to site basis.

Scenarios

Given the above consideration, minimim permit cost estimates will be generated for two types of residential development.

1. The Hahn, Koch and Uplands parcels.

Home A: A 1,500 square foot single-family detached 3-bedroom 2-bath unit.

Home B: Is one of four 950 square foot attached condominiums, each having 2 bedrooms and 1-1/2 baths. Costs will be given for the fourplex as well as per unit.

Table B shows the approximate costs based upon total valuation associated with the various required permits.¹

1. Total valuation is defined as the total value of the improvement or the construction costs. They do not include land acquisition or finance costs.

TABLE C

APPROXIMATE PERMIT COSTS*

<u>Permit</u>	<u>Home A</u>	<u>Fourplex B</u>	<u>Unit B</u>
Building Permit	\$ 417.00	\$ 753.00	\$ 188.25
Plan Checking	277.55	489.45	122.36
Plumbing	18.75	47.50	11.88
Mechanical	18.75	47.50	11.88
Electrical	18.75	47.50	11.88
Design Review	512.40	903.60	225.90
Landscape Architectural Review	-	200.00	50.00
Engineering Fees ¹	-	-	-
Town Permit Costs	1,273.20	2,488.55	622.14
Sanitary District No. 2 Fees ²	281.00	1,728.00	432.00
MMWD Water Installation Connection Fee ³	<u>2,500.00</u>	<u>10,000.00</u>	<u>2,500.00</u>
TOTAL COSTS	\$4,054.20	\$14,216.55	\$3,554.14

*For Incorporated Cortre Madera in dollars.

1. Varies tremendously from site to site. No approximate average figure can be given.

2. Based on the number of fixture units. For this estimation it was assumed that each fixture (i.e. sink, faucet) was worth an average of two units. A 3-bedroom, 2-bath house - approximately 28 units; multifamily 2-bedroom, 1-1/2 bath - approximately 24 units.

3. This ranges considerably from parcel to parcel, based on the historic usage. MMWD estimates a range of \$700-\$2,900 per unit. The mean is used for the purposes of this example (\$1,800/unit).

ASSUMPTIONS: The total valuation for Home A is \$105,000 (1,500 square feet at \$70 per square foot); for Fourplex B is \$228,000 (3,800 square feet at \$60 per square foot); for Unit B is \$57,000 (950 square feet at \$60 per square foot).

APPENDIX D

TABLE D

HYPOTHETICAL APARTMENT EXPENSES AND REVENUES - 1981¹

Scheduled Annual Revenues

50 2-bedroom units	\$600/month x	
.95 occupancy rate		\$ 360,000
Effective Gross Income		342,000

Operating Costs²

30% of Effective Gross Income	\$ 102,600
Net operating income	239,400
Minus Debt Service	-422,874
Cash Flow	\$ (-183,474) ³

CASH FLOW	\$ (183,474)
+ TAX ADVANTAGE ⁴	176,229

YEAR ONE AFTER TAX CASH FLOW	\$ (-7,245)
------------------------------	-------------

1. Development Assumptions:

Costs:

Land - 2.5 acres x \$8/sq. ft. =	\$ 871,200
Construction - 50 units x 950 sq.ft. x \$55/sq.ft.	2,612,500
TOTAL	\$ 3,483,700

Financing:

Equity	20% - \$696,740
Permanent Loan: 15% Interest, 30-Yr. Term, Principal:	\$2,786,960.

2. Excludes reserves for replacement.

3. Most lenders insist on minimum 1.2 debt coverage ratio and would therefore never underwrite such a loan. At a 15% interest rate a lender would therefore refuse to finance more than \$1.4 million. The remaining equity requirement of over \$3,000,000 would be far too high for the return on capital generated.

4. Income Tax Advantage for Investor in 50 % Tax Bracket

Net Operating Income	\$ 239,400
- Depreciation	174,167
- Interest on permanent loan	417,691
Total Tax Loss	\$ (-352,458)
Tax Advantage to Investor	\$ 176,229

APPENDIX E

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT SITE EVALUATION CRITERIA

Proposed sites for new construction projects must meet the following standards for approval from HUD:

1. The site must have an adequate size, exposure and contour to accommodate the number and type of units proposed; and adequate utilities (water, sewer, gas, and electricity) and streets must be available to service the site.
2. The site and neighborhood must be suitable from the standpoint of facilitating and furthering full compliance with the applicable provisions of Title VI of the Civil Rights Act of 1964, Title VIII of the Civil Rights of 1968, Executive Order 110653, and HUD regulations issued pursuant thereto.
3. The site must not be located in:
 - a. An area of minority concentration unless sufficient, comparable opportunities exist for housing for minority families, in the income range to be served by the proposed project, outside areas of minority concentration or the project is necessary to meet overriding housing needs which cannot otherwise feasibly be met in the housing market area. An overriding need may not serve as a basis for determining that a site is acceptable if the only reason the need cannot be met is that discrimination on the basis of race, color, religion, creed, sex or national origin renders sites unavailable outside areas of minority concentration.
 - b. A racially mixed area if the project will cause a significant increase in the proportion of minority to non-minority residents in the area.

4. The site must promote greater choice of housing opportunities and void undue concentration of assisted persons in areas containing a high proportion of low-income persons.
5. The site must be free from adverse environmental conditions, natural or man-made, such as instability, flooding, septic tank back-ups, sewage hazards, or mudslides; harmful air pollution, smoke or dust; excessive noise vibration, or vehicular traffic; rodent or vermin infestation; or fire hazards. The neighborhood must not be one which is seriously detrimental to family life or in which substandard dwellings or other undesirable elements predominate, unless there is actively in progress a concerted program to remedy the undesirable conditions.
6. The site must comply with any applicable conditions in the local Housing Assistance Plan approved by HUD.
7. The housing must be accessible to social, recreational, educational, commercial, and health facilities and services, and other municipal facilities and services that are at least equivalent to those typically found in neighborhoods consisting largely of unassisted, standard housing of similar market rents.
8. Travel time and cost via public transportation or private automobile, from the neighborhood to places of employment providing a range of jobs for lower income workers, must not be excessive. (While it is important that elderly housing not be totally isolated from employment opportunities, this requirement need not be adhered to rigidly for such projects).
9. The project may not be built on a site that has occupants unless the relocation requirements referred to in Section 880.209(a) are met.

10. The project may not be built in an area that has been identified by HUD as having special flood hazards and in which the sale of flood insurance has been made available under the National Flood Insurance Act of 1968, unless the project is covered by flood insurance as required by the Flood Disaster Protection Act of 1973, and it meets any relevant HUD standards and local requirements.¹

1. Federal Register, Vol. 44, No. 114, Section 880.206, Tuesday, June 12, 1979.

Figure 2

POTENTIAL HOUSING SITES

LOW DENSITY RESIDENTIAL
(0-2 DU/AC.)

MEDIUM DENSITY RESIDENTIAL*
(2-6 DU/AC.)

HIGH DENSITY RESIDENTIAL*
(OVER 7 UNITS/ACRE)

1.	Independent Learning School	(Low)
2.	Uplands II	(Medium-lower portion) (Low-upper portion)
3.	Triangular Marsh	(Low)
4.	Catholic Archdiocese	(Medium)
5.	Church of All Faiths	(Medium)
6.	Granada School	(Medium)
7.	Hidden Valley Ranch	(High)
8.	Koch (Mixed Use)	(Medium)
9.	Meadowsweet (Infill)	(Low - upper portion) (High - lower portion)
10.	Masada	(Low)
11.	Villa Madera	(Medium)
12.	Hahn (Mixed Use)	(High)
13.	Village Square (Infill)	(High)
14.	Paradise East	(High)
15.	Site Adjacent to Paradise Shopping Center	(High)
16.	The Shores	(High)
17.	Madera del Presidio	(Low and Medium)
18.	Quarry Meadows	(Low)

*Permitted densities may be higher if they conform to adopted land use intensity criteria; and may be lower for sites with significant environmental constraints.

COMMUNITY SERVICES AND COMMERCIAL FACILITIES

Amended May 4, 1981

Amended May 4, 1982

Amended March 6, 1984

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COMMUNITY SERVICES AND COMMERCIAL FACILITIES

PURPOSE

Although not a state-mandated element, the Community Services Commercial Facilities section is an essential part of the Corte Madera General Plan. Its major purpose is two-fold: first, to provide recommendations that will assure an adequate and equal level of public services and facilities for all Town residents and second, to prescribe the type and location of goods, private services and employment opportunities that should be available to residents.

Although commercial development is considered to be the responsibility of the private sector and community services to be the responsibility of the public sector, the two overlap considerably. For example, while the provision of retail goods and services is considered as private development, it is also a necessary community service since residents must be able to purchase neighborhood-type goods and services within a short distance from their homes. The other component of commercial development-office and industry - is also considered since it should not be separated from the retail function in terms of its location in the Town and its compatibility with residential development. As well, office and industry provide employment opportunities in the community. The aspect of providing work close to home in order to reduce commuting time and cost is rapidly becoming a major community service. The major concern, however, must be that the location of such employment does not have a significant adverse impact on the livability of neighborhoods and as well, must be consistent with the Town's environmental quality aims.

This section is closely allied with the Land Use Element and, as such supports the following three major aims:

1. To preserve and enhance the small-town scale and character of Corte Madera in both the regional and local setting.
2. To provide public and private community-related services that are adequate and accessible.
3. To maintain a reasonable balance between public cost and revenues.

TOWN-WIDE POLICIES

A series of Town-wide policies has been formulated to attain the three general aims cited above. Following these policies is a review of the extent and condition of the existing public and private services and facilities in Corte Madera, and a series of specific policies and recommendations for the expansion and/or improvement of these services. It shall be the policy of the Town of Corte Madera:

1. To provide a full range of community-related services within the Town boundaries.
2. To expand the local employment opportunities by encouraging an increase in facilities which will promote a more diversified tax base and will reduce the amount of time and distance spent in commuting. The location of these facilities should be compatible with other land uses and consistent with the Town's environmental quality aims.
3. To promote a greater efficiency in the provision of Town services and to maintain equal levels of public services in all portions of Corte Madera.
4. To improve the accessibility and use of existing Town-wide public services and facilities.
5. To encourage reorganization, where necessary, of public service district boundaries so as to improve access and use.
6. To promote a high level of police and fire protection.
7. To coordinate development and the expansion of public services and to maintain high development standards to ensure that excessive maintenance costs do not accrue to the public within either the short-or long-term future.
8. To promote a greater sense of community between east and west Corte Madera.
9. To improve the communication and level of information between the Town and its residents.
10. To encourage citizen participation in the processes of Town government.
11. To require all new developments to provide underground utilities, to continue the scheduled undergrounding of existing utilities as it becomes financially and technically feasible, and to actively work with public utilities for the reduction of visual impact of existing and/or proposed utilities.

EXISTING CONDITIONS

COMMUNITY SERVICES

Although some public services are currently adequate, future development in Corte Madera will strain these services. However, the major problem in regard to public community services results from U.S. 101 which splits the Town in two and constitutes a physical barrier. As of April 1970, 73 percent of the Town's residents live west of the freeway and the remainder live in the more recently developed east portion. However, proposed residential projects would substantially increase the population in the east. Unfortunately, community services have not kept pace with the rapid rise in population. Almost all community services and facilities (Town Park, Library, Recreation Center, Town Hall, Police Department and junior and senior high schools) are located or headquartered west of the freeway. Present access between east and west Corte Madera is confined either to the Tamalpais Drive freeway interchange which has no provisions for pedestrian movements, or to a narrow and isolated underpass adjoining the City of Larkspur. No freeway crossing provisions have been made for pedestrians or bicyclists. Inequities in services in the two portions of the Town have become a major concern of the community. Other major public service issues facing the Town are summarized below.

PUBLIC SCHOOLS. Students in Corte Madera are now attending public schools in four separate school districts: The Larkspur-Corte Madera and Reed School Districts for kindergarten through eighth grade; Tamalpais Union High School District; and the Marin Community College District which operates the College of Marin in Kentfield. The Larkspur-Corte Madera School District is responsible for most of Corte Madera's elementary school students and they attend the Larkspur-Corte Madera Elementary School in Larkspur, the Neil Cummins School adjacent to the Town Park, Henry C. Hall School on Doherty Drive in Larkspur, and the San Clemente School located on the north side of Paradise Drive, west of Golden Hind Passage. Since San Clemente School and Larkspur-Corte Madera School are for kindergarten through sixth grade, students must attend either Neil Cummins School, Corte Madera, or Henry C. Hall School, Larkspur, for grades seven and eight. The Reed School District serves the southern half of the Marin Estates subdivision and the area east of Marin Estates south of Paradise Drive bounded by Sonora Way and the ridge. This district operates the Granada School in Corte Madera south of Paradise Drive, but since it is only for students through the fifth grade, grades six through eight are taught at the Reedland Woods School located on the southern side of the ridge in Tiburon.

All public high school students attend Redwood High School in Larkspur, just north of the Corte Madera boundary. This school is operating to capacity (about 2,600 students) and, in an attempt to alleviate overcrowding, has recently instituted new scheduling techniques to more efficiently utilize school facilities and staff.

If the Madera del Presidio area is developed, students will be in the Mill Valley School District, the third elementary school district to serve Corte Madera. However, the closest school in this district is the Strawberry School near Richardson Bay which would require busing.

The current delineation of elementary school boundaries in Corte Madera has resulted in excessive busing of children and has prevented neighborhood identification with the schools since the districts bear little resemblance to the boundaries of established neighborhoods or the Town.

RECREATION. The only significant open and level park land in Corte Madera developed for general recreational purposes is the 26.9 acre Town Park on Tamalpais Drive west of the freeway. This park is intended to serve the entire Town Population of over 9,000 persons (about 2 acres/1,000 persons). However, the park is too small to serve all residents and is inconveniently located for the 27 percent (2,450 persons) of the population who live east of U.S. 101. Those residents rely on small recreation areas associated with the San Clemente and Granada Schools, on Skunk-Hollow Park, and on one other mini-park and municipal tennis courts east of the freeway. Other small parks in Mill Valley, Larkspur and Tiburon can be used by Town residents, but these generally require an automobile for access.

The Recreation Center, built by the Corte Madera Lions Club and donated to the Town, is presently operated by the Lions Club under terms of a lease due to expire in 1976.

Park and recreation programs are administered through the Town's Recreation Department which conducts activities and classes in the Town Park, the Recreation Center adjacent to the Town Park, and in the All Faiths Church on Paradise Drive. Since the Recreation Department must pay a share of its running expenses, a 50 percent indirect overhead cost is included in the recreation fees charged to participants in programs. An increase in costs must be compensated by an increase in fees, thus a decrease in resident participation in the programs occurred during the 1972-73 year. The department also has a policy to cancel classes that do not have sufficient sign-ups to cover costs. Moreover, publicity is limited and many residents are not informed of available programs since recreation program information is distributed mainly through the elementary schools, library, several pharmacies, and churches. No distribution is permitted by Redwood High School and a large portion of the teenage population is unaware of the extent of available opportunities. The enrollment in programs during the 1973-74 season was about 26,600 and the summer playground program had participation of about 35,650. The City of Larkspur presently participates in the summer program.

POLICE PROTECTION. Police services are provided by the Corte Madera Police Department located adjacent to the Town Park. The department presently has a force of 14 sworn officers (1.45 sworn officers per thousand population) and residential burglaries and shoplifting are considered to be among the department's greatest problem.

Areas of greatest activity are: preventive patrols; emergency and service calls; apprehension of law violators; juvenile matters; traffic enforcement and administrative matters. The preventive patrol program is an effort to reduce daytime burglaries.

In addition to the police protection afforded by the Corte Madera Police Department, the California Highway Patrol maintains a field office northeast of the Tamalpais Drive freeway interchange. The Zone III commander has indicated that the present facility is undersize for present personnel and work load. The patrol is not responsible for property protection, but their presence in Corte Madera has beneficial effects on traffic safety. Additionally, there is an existing mutual aid agreement with the Marin County Sheriff's Office.

FIRE PROTECTION. Fire protection is provided by the Corte Madera Fire Department which has a full-time staff of 11, including the Chief and his assistant. In addition, there are 6 daytime volunteers from the Corte Madera Public Works Department and an additional 15 volunteers in the Town. The department maintains two fire stations, with the main station adjacent to the Town Hall where at least three men are on duty at all times. There is a satellite station at 5600 Paradise Drive operated on a volunteer basis and is only manned part-time. Total fire fighting equipment includes seven vehicles with a combined pumping capacity of 2,500 gallons per minute, augmented by two high pressure units. The sub-station on Paradise Drive has one high pressure truck and one pumper.

WATER SUPPLY. Corte Madera is served by the Marin Municipal Water District (MMWD) which has an existing storage capacity of 52,010 acre-feet in their five reservoir lakes in central Marin County. The District has no outside water sources. In 1970 they served an estimated population of 170,000 with 50,308 service connections. Based upon an analysis of past rainfall and watershed yields, the reservoirs have an annual "net-safe yield" of 26,000 acre-feet. However, the district has adopted a policy to risk a water shortage once in every 30 years, yielding a planned purpose water supply of 33,000 acre-feet per year. While gross per capita water consumption has been reduced since 1970, increases in population are once again increasing water demand. Total water demand from MMWD in 1972 was 31,400 acre-feet, an excess of more than 5,000 acre-feet over the net safe yield. With demand now threatening the planning purpose supply, the district's Board of Directors has imposed a water pipe extension ban to all new developments until the gap between the net safe yield and the actual present supply can be closed. An intertie with the North Marin Water District would permit

an increase in supply of approximately 4,000 acre-feet per year. This, however, is only feasible if the North Marin Water District's proposed facilities for importing additional water from the Russian River is approved by North County voters. Until such time, the North Marin Water District will itself continue to experience a water shortage. There are certain residential areas within the Town which have insufficient water pressure.

SANITARY SEWERS. Corte Madera is served by the County Sanitary District No. 2 which collects and transfer liquid wastes to the County Sanitary District No. 1 sewage treatment facility on the San Quentin Peninsula for treatment and disposal. District No. 1 performs these treatment and disposal operations under a contract which allows for a maximum daily flow of 1,175,000 gallons per day (1.175 MGD). District No. 2 is approaching capacity and will be required to negotiate a new contract when they exceed the contracted flow. The existing treatment facilities of District No. 1 provide secondary treatment, with 85 percent removal of biological oxygen demand (BOD) and suspended solids. Total capacity is approximately 4.5 MGD, while the average current flow is about 4.2 MGD.

District No. 1 is currently under a cease-and-desist order issued by the Regional Water Quality Control Board. Removal of this order will require that the district eliminates bypassing of treatment facilities during high rainfall periods, when flows become excessive due to infiltration. Additional connections to District No. 1 lines may be made as the facilities are improved or infiltration reduced. District No. 1 anticipates that their treatment facility will be consolidated with that of San Rafael. Treatment would be secondary, with 90 percent removal of BOD and suspended solids through filtration.

The cease and desist order does not apply directly to District No. 2, thus, there is no limit on new connections except as imposed by the current contract. However, District No. 2 is also experiencing infiltration problems in their sewers. This is the leaking of ground water into the system, which increases the flow and decreases the excess capacity available under the contract. The district is currently studying the problem areas of their system and is attempting to eliminate this infiltration and correction of this problem could lead to increases in present sewer capacity. The District has embarked upon an extensive rehabilitation program.

STORM DRAINAGE. A comprehensive drainage plan has been in effect in Corte Madera since 1956, but during the last few years drainage problems have become severe. Flooding problems associated with heavy rainfalls can be corrected through improvements in the storm drainage system and, once improved, flooding will no longer be a serious deterrent to development.

Flooding can result from either of two phenomenon. The first, storm runoff originating within Corte Madera, floods lowlands because of an inadequate drainage network that does not transport water into San Francisco

Bay. The second cause, high tides in the Bay, force water up into stream channels and inundate all un-leveed lands below the tide level. The elevation of the water surface in the Bay depends on tide, local run-off, and wind and wave effects. The floods on and around U.S. 101 during January 1973 were caused by a combination of both tide and inadequate drainage, an extremely rare occurrence.

Since the drainage plan took effect, increased housing construction has covered more land with impervious surfaces. The result is greater run-off of storm water and reduced usefulness of water detention areas. The lower portions of the Town can experience flood damage, but the hillsides that contribute to the additional run-off escape flooding. Flooding has been further complicated by the fact that in some reclaimed tidal lands the clay materials in the Bay Mud are so unstable that land subsidence takes place over periods as long as 100 years. Therefore, certain areas in Corte Madera have subsided to elevations that cannot now be drained with the existing storm drainage system. Natural ponding areas were once commonplace in the tidal lands of Corte Madera, but the gradual filling of these lands prevents storm waters from draining to these areas. Instead, the waters must proceed down channels into the Bay or to other lowlands where ponding can occur. This has resulted in a further flooding complication. The Town does own two lagoons in the Madera Gardens subdivision, and has the right to maintain the lagoons for drainage and flood control purposes only.

Frequent storm drainage and acute flooding problems in recent years have reached serious proportions in certain areas in Corte Madera including Madera Gardens, Marina Village and tidal flats east of the freeway. While other sections within the Town also experience recurring floods, the most affected areas are those built on tidal flats equal to almost one-half of the Town's total area.

ENERGY AND COMMUNICATIONS. Electricity and gas service is provided by Pacific Gas and Electric, and communication service is provided by Pacific Telephone. Pacific Telephone operates under a State wide franchise based on Section 901 of the Public Utilities Code. This franchise allows telephone companies to place their facilities in streets and highways without compensation to the individual cities and counties.

Ordinance No. 289 (Gas) and Ordinance No. 290 (Electric) adopted August 5, 1957 granted the P.G. & E. franchise rights to operate gas and electric facilities in the Town of Corte Madera. This franchise is indeterminate as stated in Section 4, page 2 of these ordinances.

CABLE TELEVISION. Corte Madera is now served by Tele-Vue Systems of Marin, Inc. which operates through a franchise agreement with the Town. Of the approximately 3,200 dwelling units in Corte Madera, 2,700 subscribe to this service.

*Amended January 3, 1978.

Cable television is regulated by the Federal Communications Commission (FCC) which recognizes the potential of cable TV for use by public agencies including police and fire departments. Comprehensive public agency use in more populated areas such as Marin County would require television sets with a 20-station capability. Installations in Corte Madera are not up to this standard.

SOLID WASTE DISPOSAL AND REFUSE COLLECTION. Solid waste from Corte Madera is collected by the Mill Valley Refuse Service for disposal at the West Contra Costa County Dump which has an estimated life of 40 years at current rates of disposal. The original ten-year contract expired March 31, 1975, with a fifteen-year renewal option, which calls for garbage pickups once a week and trash pickups three times a year. The company charges three separate rates: (1) level areas; (2) hill areas; and (3) the Christmas Tree Hill area.

COMMERCIAL FACILITIES

RETAIL. The major portion of Corte Madera's retail facilities are found in the Corte Madera Shopping Center, located west of U.S. 101 and north of Tamalpais Drive. The center was constructed in the late 1950's and has a total floor area of approximately 250,000 square feet. Major tenants include J.C. Penney, Montgomery Ward and Woolworth's, plus banks and other small stores, a supermarket and a food-service facility.

A smaller, neighborhood-type facility is the Paradise Drive Shopping Center, located on the south side of Paradise Drive directly east of the railroad right-of-way. The center contains a supermarket, drug store, food-service facilities and several other neighborhood-oriented retail establishments.

West of the freeway in the original central business district, Village Square, are a number of other local neighborhood retail outlets, primarily on Tamalpais Drive and Corte Madera Avenue. The stores are situated east and west of the railroad tracks.

The Co-Op Shopping Center is located at 71 Tamal Vista Boulevard and offers a variety of retail services.

Park Madera Shopping Center is on the north side of Tamalpais Drive in the 400 block.

A few neighborhood-type service facilities, including gasoline stations and real estate offices, are located along Tamalpais Drive between the freeway and the Recreation Center at the Town Park. Along the freeway frontage roads are several automobile sales and service centers.

An additional retail-office/administrative area is developing in the vicinity of Fifer Avenue and Nellen.

OFFICE/ADMINISTRATIVE. A small percentage of the land in Corte Madera is devoted to office and administrative uses; the primary concentration in Marin County is located in and around San Rafael. However, in the Town itself are offices for the California Department of Motor Vehicles, Marin County Superintendent of Schools, the Marin Municipal Water District and the Park Marin Office Center. These are located west of the freeway along Tamal Vista Boulevard. The California State Highway Patrol is located northeast of the Tamalpais Drive freeway interchange. Scattered, small office functions can also be found within the various retail areas.

INDUSTRY/WAREHOUSING. Most industry and warehousing is located west of the freeway near Tamal Vista Boulevard and the major facilities include the Montgomery Ward warehouse and the Handi-Kup Company. Tamal Plaza, a new office and warehouse project containing approximately 7 acres and 108,000 square feet of space will be built on the west side of Tamal Vista Boulevard. Another industrial area is owned by H. Koch & Sons, a site of approximately 31 acres east of the freeway and south of Tamalpais Drive, but at present 28.5 acres remain undeveloped. Several new businesses have located in the area bounded by Tamalpais, San Clemente and Paradise Drive.

SPECIFIC POLICY RECOMMENDATIONS

Specific policy recommendations for the improvement of the Town's public services and non-residential development have been formulated to provide for optimum service, accessibility and use. The location of the existing and proposed services and facilities are shown in the Community Services and Commercial Facilities Map, Figure CS1.

The following discussion has been divided into two parts. The first, Community Services, presents policy recommendations for the public services that are the responsibility of the Town, whereas the second, Commercial Facilities, deals mainly with the privately funded improvement of the retail and office/industrial service districts.

COMMUNITY SERVICES

Many of the Town's public services are the responsibility of both the Town and the County of Marin, and improvement in the delivery of these services will require increased cooperation between the two jurisdictions.

PUBLIC SCHOOLS. The Town should support efforts to see that school boundaries conform to established neighborhood areas wherever possible and should aim at reducing the amount of necessary busing. Definitive boundaries cannot be determined prior to an accurate analysis of the number of school-age children in each portion of Town, as well as the anticipated increase due to proposed or planned developments, and the capacity of the schools and their ability for expansion. However, the feasibility of including all areas south of Paradise Drive in the Reed School District should be determined.

LIBRARY SERVICES. The county's branch library in Corte Madera is located in the western section of Town on Meadowsweet Drive. Budget problems have resulted in slow book acquisition so that the library collection is about half its shelf capacity. The Town should request that the county provide

additional funds to the Corte Madera Branch for an accelerated acquisition program to provide better service and increase monthly circulation. If a Town newsletter is created, publicity of library services should be included.

RECREATION. Major improvements are necessary to the Town's recreational services. New park lands should be developed to alter the present 2 acres/1,000 persons to a minimum of 5 to 6 acres of park land for each 1,000 persons. Park areas should be distributed throughout Corte Madera and publicity regarding parks and park programs should be widely and actively disseminated.

The Open Space and Conservation Element makes several recommendations for future park lands to primarily serve local residents. Including the existing Town Park, these recommendations would provide a total of 79.6 acres of park land. Should the Fire Department substation on Paradise Drive become available, a high priority should be given to its use for public recreation.

In addition to the local-serving recreation areas, region-serving parks prospectively include a 74.5 acre shoreline park on the Muzzi Property and a series of county-wide trails over the Tiburon Ridge and the Northridge, also recommended in the Open Space and Conservation Element. Improvements in the existing play facilities at the public schools will further increase the amount of land available to residents for active recreation programs.

A major concern must be to improve and increase publicity of the park programs to attract additional revenues and to maximize services. Some of the methods which could be employed are the mailing of circulars to each Corte Madera household, distribution of information through elementary and secondary schools, laundramats, supermarkets, pharmacies, cleaners, beauty shops, the library and all other public and private establishments that cater to the local population. Further, a community newsletter circulated to all Corte Madera households should contain information on all public proceedings, programs and plans that affect the Town, including its recreation services. The latter would probably be the most effective and efficient since costs would be shared by many Town departments and civic organizations.

Consolidation of recreation services between Corte Madera and Larkspur should also be considered as a means to reduce costs and improve the variety of services available to all residents. This proposal is discussed in more detail on page CS-20.

POLICE PROTECTION. Present police services appear to be adequate although new developments, such as new commercial facilities or new housing, may require an increase in the number of personnel in order to maintain the current ratio of approximately 1½ sworn officers per thousand population. New commercial facilities will cause an increase in crimes such as shoplifting and auto theft. Although internal security and traffic problems will be the responsibility of a private security force, all crimes must be reported to the Police Department and violators apprehended. This will call for an increase in personnel due to the increase in work load. Environmental Impact

Reports prepared for each new development must adequately address themselves to the need for increased police protection and an analysis should be prepared documenting this increased Town cost and the extent to which it will be offset by the tax revenues produced by the project. In addition, as more police officers and/or office personnel are needed, an assessment must also be made of the ability of the present physical facilities on Tamalpais Drive to adequately handle the new employees.

HIGHWAY PATROL. The California Highway Patrol is relocating, and it is the Town's policy to encourage them to relocate in the immediate area, subject to consideration of cost, accessibility, compatibility of land uses and site availability.

FIRE PROTECTION. A high priority should be given to the upgrading of the fire safety in buildings in the Town, including the installation of new steamer-type fire hydrants, addition of firemen as needed. It is the Town's policy that there will be a continuation of both a paid and a volunteer force. Every effort should be made to enhance both aspects of this service.

WATER SUPPLY. The Marin Municipal Water District is responsible for providing water for the area encompassed by this General Plan. The policy is to encourage adequate supply to cover the needs of the community with particular emphasis on fire protection. There is presently a water moratorium, and new service connections are not generally permitted except under conditions outlined in the District ordinance. The policy of the District is to require that all processing and approvals be obtained by a developer prior to the District's consideration of extension of water service.

Most sites above 190' elevation pose water problems. Since the present water supply is adequate to serve existing Town developments, all new project proposals must be considered on an individual basis and their water requirements and supply solutions carefully assessed prior to Town approval.

SANITARY SEWERS. Proposed future development of commercial facilities at U.S. 101, as well as new residential developments, would reduce excess capacity to the point that demand would exceed contracted capacity. This will require that District No. 2 negotiate a new treatment contract with Sanitary District No. 1 or expand District No. 1 treatment facilities. The former alternative is not likely at this time, due to the cease-and-desist order imposed on District No. 1 by the Regional Water Quality Control Board. The latter alternative would present problems in financing and justification of costs for District No. 2 since consolidation with other sanitary districts is highly likely in the near future. This action would result in construction of a new regional sewage treatment facility to eventually replace the existing District No. 1 plant.

Therefore, all new developments that will cause a demand greater than is available under the present contract should be denied approval until an additional or regional facility is provided.

STORM DRAINAGE. A study released in December 1970 by Yoder-Trotter-Orlob & Associates (Y-T-O) recommends improvements in the Town's storm drainage system in order to adequately protect against flood hazard throughout Corte Madera. An additional study of watershed no. 6 (as identified in the Y-T-O report) prepared by Anderson-Nichols/West, titled "Conceptual Design Report, Storm Water Pumping Station, San Clemente Creek of Paradise Drive" was released in December 1980. The Town Council has officially adopted both reports and can require a developer to provide or contribute toward these studies' recommended flood control measures.

The Town should embark on a concentrated program to implement the Y-T-O and Anderson-Nichols recommendations, particularly in the low-lying areas most subject to flooding. Use of funds other than general obligation bonds should be considered first to avoid additional tax burdens on local residents. Where proposed developments would increase the risk of flooding in areas downstream from the development, the installation of or payment toward such measures as are necessary to mitigate the increased risk should be required of the developer as a condition of approval.

Other small-scale, but critical, improvements in other parts of the Town should continue to be financed through the Town's general funds. As state or federal funds become available, the Town should apply for grants to complete the entire program.

The Town's rights per grant deed to use the two lagoons in the Madera Gardens subdivision should continue to be limited to drainage and flood control purposes only.

REFUSE COLLECTION. The present once-a-week rate of refuse collection and three trash pick-ups per year is considered to be adequate. Extra services shall be available upon demand for appropriate fees under the franchise agreement.

Amended January 3, 1978
Amended May 4, 1981

CITIZEN PARTICIPATION. Improvements in the cable television capability could establish a means to provide free public announcements. Since a majority of the households in Corte Madera take advantage of the cable television service, this could be an excellent method for providing information to a maximum number of people. The station could also be used for public forums, whereby citizens and public officials could have the opportunity to discuss opinions before a large viewing audience.

In addition to the above, the Town should maintain standing committees, in conjunction with Planning Commission and Town Council members, to continually review and monitor the Corte Madera General Plan. This will assure that all proposals are complementary to the provisions in the Plan and that the document is revised as necessary.

COMMERCIAL FACILITIES

Commercial facilities are important to Corte Madera. They not only generate sales tax revenue for the Town, but also provide residents with goods and services close to their homes. Commercial development also creates new jobs at all income levels.

However, the need to expand the tax base should not override Corte Madera's desire to maintain its small-town character. The scale, height, materials, and bulk; traffic impacts; impact on public services; and environmental impact must all be compatible with existing development and with Corte Madera's small-town character.

To ensure that traffic generated by new commercial development does not exceed the capacity of local streets, and to maintain Corte Madera's small-town scale, offices, retail stores, and other commercial developments should not exceed an intensity of 14,000 to 15,000 square feet per gross acre. This figure may be modified in the future if new traffic studies demonstrate that local streets do have adequate capacity for increased development, and that more intense development is compatible with Corte Madera's small-town character.

Policies regarding major types of commercial facilities - neighborhood centers, regional centers and office/industrial centers - are presented below.

NEIGHBORHOOD SHOPPING CENTERS. Neighborhood centers provide for the sale of convenience goods (such as foods, drugs, restaurants and sundries) and personal services (such as laundry and dry cleaning, barbering, shoe repair) for the day-by-day living needs of the immediate neighborhood. They are usually built around a supermarket as the principal tenant.

Retail uses which do not serve the day-to-day needs of the neighborhood and which are primarily dependent upon customers from outside the neighborhood should be discouraged. Non-retail uses such

as banks, savings and loans, and offices may displace retail sales and services needed to serve local residents. These non-retail uses should be strictly controlled in neighborhood shopping centers to ensure that they remain secondary to local-serving businesses and to ensure that the mix of businesses in the shopping center will provide needed services to the neighborhood.

In addition, convenience food stores should be readily accessible to all Corte Madera residents. At least one convenience food store is needed in both east and west Corte Madera.

The neighborhood shopping centers in Corte Madera are discussed below.

1. Village Square. This retail commercial area near the intersection of Tamalpais Drive, Redwood Avenue and Corte Madera Avenue contains some of the most historic buildings in the Town. The area should be redesigned into a more cohesive local shopping district with Menke Park serving as the focal point for both the commercial area and the community. It should continue to include neighborhood retail facilities such as a hardware store, pharmacy and small market. Small restaurants, bookstores, coffee shops and even a few speciality shops could be integrated into the area. The replacement of the retail stores with offices should be discouraged so that the area retains its function as a neighborhood shopping center.

It is possible that the existing uses could be expanded after a precise plan is completed for the area. Public improvements, such as landscaping, lighting, parking, and sidewalks, could be financed through a benefit assessment district. Necessary remodeling to the shops themselves could be the responsibility of the owners, and the plan developed for the area should make recommendations to achieve a consistent design theme.

2. Park Madera Center. This three-acre neighborhood shopping center is located on the north side of Tamalpais Drive. Madera Foods is the major tenant. Its market area is similar to that of Village Square.

Remodeling of the stores, a new circulation plan for the parking lot, and design changes to improve the center's relation to Town Park would be desirable.

3. Paradise Drive Shopping Center. This area should continue to serve as the primary neighborhood center for east Corte Madera. Because east Corte Madera may be inaccessible in a disaster, a convenience food store should be retained within the shopping center. Extensive rehabilitation is desirable, including remodeling of the buildings, landscaping, lighting, screening from Paradise Drive and

adjacent residences, and changes in the parking lot. Increases in population east of the freeway from new residential development should help the economic viability of this center.

4. Corte Madera Center. Although this is a regional shopping center, it also serves as a neighborhood shopping center because it includes a Cala Foods supermarket and a Thrifty drug store. Its market area is similar to that of the Coop Shopping Center.

The Corte Madera Center has the most potential for attracting a large supermarket to Corte Madera, and any plans for the renovation and expansion of the center should include a supermarket.

REGIONAL SHOPPING CENTERS. Regional shopping centers sell general merchandise, including food, soft lines (such as clothing) and hard lines (such as furniture, hardware, appliances) in full depth and variety and provide complete comparison shopping goods. They are built around a full line department store as the major drawing power. Because they offer complete shopping facilities, their trade area may extend for ten or fifteen miles around the center.

1. Regional Shopping Center. A 78-acre site located east of the freeway and north of the Tamalpais interchange meets the criteria for a region-serving shopping center. However, when the ecological value of the site is considered, only about 45 acres are useable for the shopping center. Almost all of the useable acreage is located south of the two ponds and directly across the freeway from the existing Corte Madera Center.

If and when the 45 acre site is developed, the 32 acres of ponds and surrounding open space should be preserved as a natural habitat area. Because the developable site is very visible, special criteria must be followed to arrive at the most desirable development plan. Some of the development standards and design criteria that are necessary are as follows:

- A. One unified plan must be submitted for all the properties included in the 78-acre site, including properties owned by Humber, Boro and Hahn. That plan must address dedication of marshland, traffic improvements, and other measures acceptable to the Town to mitigate the impacts of development.

1. Properties Included in Application.

- a. Any plan should include the triangular parcel presently owned by Vernon Humber (also known as the Humber marsh) to mitigate the use of part of the Hahn marsh as a retention basin.

b. The railroad right-of-way may be deleted from the plan, unless it is required for mitigation.

2. Dedication of Marshland.

a. At least 32 acres of marshland must be dedicated to the Town, including the Maggiora-Ghilotti site and the triangular Humber piece. This area should be restored to a "natural state" in a manner acceptable to the Town. The Maggiora-Ghilotti site could be restored as a passive interpretive center.

b. Any plan should preserve the linear drainage canal with high habitat value located west of the railroad right-of-way. If it is used as drainage for a project, it should be maintained by the project.

c. Improvements to the marsh habitat will be required.

B. The amount of retail commercial space on the site shall be limited to between 300,000 and 400,000 sq. ft.

The amount of retail commercial space permitted will strongly depend on the specific high-quality retail tenants proposed by an applicant.

C. Any development plan shall include a mixture of uses, which may include retail sales and services; offices, restaurants; and residences.

1. Offices should be limited to some second-story locations with Bay views. Retail uses may be preferable if they will generate no more traffic during the peak hour.

2. Residential use of part of the site is desirable.

D. Any overall design and layout of a project on this site shall clearly take into account Corte Madera's small-town character and should reflect the aesthetic requirements imposed on the site by its position within the various view corridors between the Bay and surrounding hills.

E. No project may be approved unless off-site and on-site transportation improvements acceptable to the Town are proposed which will achieve acceptable levels of service on local streets, as defined in the Circulation Element.

Any project on the site shall be responsible for funding its fair share of all off-site and on-site transportation improvement measures needed to achieve acceptable levels of service.

- F. An occupancy permit may not be granted for any development on the site until the traffic improvements required to be installed by the developer have been completed to the extent deemed necessary by the Town.
- G. All changes to surface or subsurface drainage due to any proposed development shall be mitigated by properly engineered projects (which might include pumping facilities, raised dikes, etc.) to protect surrounding areas.
- H. All off-site and on-site improvements required to mitigate the impact of a project shall be funded by the developer.
- I. A long-term maintenance bond or other adequate guarantee shall be required to protect the Town against damage to roads, utilities, and other public facilities from future subsidence and related soils or physical problems that result from the proposed development.
- J. The Town desires a reputable, financially solvent developer to develop the site.

2. Corte Madera Center. The existing Corte Madera Center covering 25 acres is also a region serving retail center. This center should be upgraded to current design and traffic circulation standards. The Town should encourage the owners in planning modernization of the Center. The impact of a new commercial development in Southern Marin could be substantially adverse unless the Center is in a position to compete effectively for tenants and patronage. Directly north of the existing Corte Madera Center and considered part of the region serving commercial area is the Edgewater Motor Hotel.

REGION-SERVING COMMERCIAL AREAS

1. San Clemente Auto Sales Center. This 26-acre site bounded by Tamalpais, San Clemente and Paradise Drives has been partially developed, mostly with automobile and motorcycle sales and service centers. Additionally, the area contains a lumber yard, pet hospital, small office building and other assorted service-type facilities, some of which are in poor physical condition. Some of this area is subject to flooding, and fragmented parcelization has made it impossible to establish a cohesive development pattern. Located at a major entryway into Corte Madera and visible from vehicles passing through on the freeway, the older development is a visual liability to the Town. Future development in the area should be consistent with existing uses. These uses are compatible with its freeway location both for its direct freeway access and its isolation from residential areas. Landscaping and standards for building siting and design (including height, materials and form) have been established in the Paradise/San Clemente Specific Plan.

2. Meadowsweet Drive Commercial Area. This area, consisting of automobile sales and services, motel and restaurant, on the west side of the freeway, should continue its present highway-related function. The Town should adopt more stringent design, landscaping and sign criteria so that the siting, form, height and materials of structures are more compatible with adjacent residential uses.

3. Tamal Vista/Nellen/Fifer Commercial Area. This area includes such region-oriented retail businesses as Big Five Sporting Goods and New York Fabrics; the Cinema Theater; and restaurants. Substantial office developments exist at Tamal Plaza and on Fifer Avenue. A street tree and landscape plan for the area has helped to unify development there and should be continued.

Most of the businesses in the area are not adjacent to residential neighborhoods. However, the Coop Center is directly across the street from the Casa Madera townhouses and is close to the Madera Gardens neighborhood. Any uses in the center should be compatible with the adjacent residences. Regional commercial, highway commercial, and service commercial zoning is not appropriate for the site. Desirable improvements to the center would include landscaping in the parking lot and remodeling of the center to improve its appearance and to achieve a more efficient use of space.

OFFICE/INDUSTRIAL SERVICE DISTRICTS. Any office and industrial development in the Town should occur under the Planned Development Ordinance. These districts will provide additional employment opportunities for Marin residents, and they should be located near the freeway to permit direct vehicular access for both employees and truckers. Development should be confined to those businesses which maintain a low to medium employee density in order to avoid large increases in vehicular traffic.

CIRCULATION AND SCENIC HIGHWAYS ELEMENT

Amended **June 5, 1978**

Amended May 4, 1981

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Amended May 4, 1981

CIRCULATION ELEMENT

PURPOSE

The aim of the Circulation Element is to provide residents with improved access to jobs, goods and services in a manner that is also consistent with environmental quality goals. The Town's circulation system bears a close relationship to other Plan elements since the capacity of local streets and the precise location of transportation rights-of-way will greatly affect land development patterns.

The land area and facilities needed to accomodate a population dependent on the private automobile are enormous. Now, however, as our capacity to provide those facilities is limited, it is clear that an alternate system must be developed. There are many residents who simply have no access to automobiles or are too young or old to drive. It is increasingly evident as well that for reasons of social impact, pollution and land conservation, more land cannot be devoted to the automobile. This Element is, therefore, concerned with providing recommendations for an alternate circulation system for Corte Madera.

TOWN-WIDE POLICIES

The following policies set the framework for a balanced transportation system which integrates vehicular, transit and pedestrian movements and systems. The policies are followed by a summary of existing facilities and conditions, specific recommendations for the design or redesign of facilities, and funding sources for implementation.

To insure the development of a circulation system that will best serve the residents of Corte Madera, it should be the policy of the Town:

1. To assure that the design of all new transportation rights-of-way will be consistent with the small-town scale and character of Corte Madera and maintain the natural appearance of the surrounding hills and ridges;
2. To discourage the use of local roadways by commuters during peak hours;
3. To maintain acceptable levels of service on local streets and roadways;
4. To insure that all new developments share in the cost of all needed transportation improvements based on the traffic generated by each project;
5. To provide safe access throughout Corte Madera for motorists, bicyclists and pedestrians by upgrading dangerous interchanges, intersections and roadways, including local and through routes, where consistent with other circulation policies;
6. To minimize the intrusion of vehicular traffic and its associated visual and noise impacts into residential areas;
7. To reduce the dependency on the private automobile by promoting local and regional public transit to provide access to jobs and services and to improve air quality;
8. To improve the visual aspects of streets, roads and bicycle paths by the use of landscaping and trees where appropriate.

EXISTING CONDITIONS

Reliance by residents on the automobile for commuting purposes is high in both Corte Madera and the rest of the county. This dependence has resulted in several problems: traffic congestion during the peak commuting hours; an increase in noise and air pollution levels. Within this section, existing travel patterns, circulation conditions, and problems are described in detail.

MOBILITY. In April 1970, only 35.8 percent of Corte Madera's employed residents worked in Marin County. Nearly half of all commuters worked in San Francisco, with 20.8 percent of all commuters working in the San Francisco central business district. About 69 percent of all Corte Madera commuters travelled to work as a driver of a private automobile and another 12 percent were passengers. In all, 81.5 percent of the commuters used automobiles to get to work, whereas only 12 percent used the bus. Since 1970, the bus and ferry system to downtown San Francisco has been improved by the Golden Gate Bridge District and is carrying significantly more passengers. It can be assumed that use of the private automobile for commuting purposes has decreased somewhat, and the use of the ferry and bus has increased.

Nevertheless, the fact that nearly half of all Corte Madera households had two or more cars available illustrates the degree to which the transit system must compete with the private automobile. At present, the transit system emphasizes the commute to downtown San Francisco; it can therefore be assumed that most residents working at other destinations still rely on their cars.

Overall, the mobility of Corte Madera residents is similar to that for the county as a whole, except that a much larger percentage of Corte Madera residents commutes out of the county than Marin County residents as a whole.

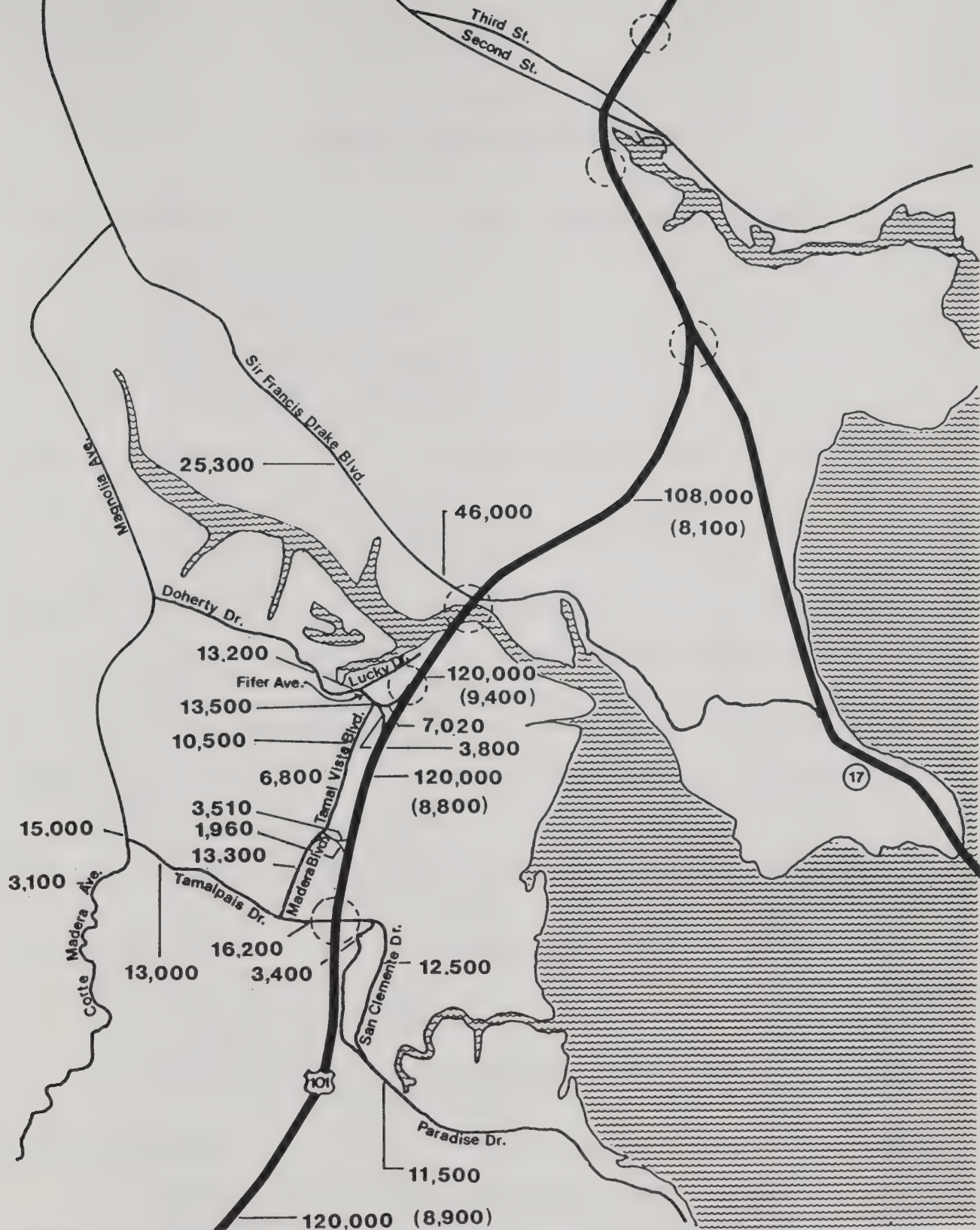
FREEWAY CONDITIONS. Corte Madera is located in a critical position along U.S. 101, the major north-south transportation route in Marin County. Large volumes of traffic from the Upper Ross Valley (Ross, San Anselmo and Fairfax) and San Rafael use Sir Francis Drake Boulevard and Second Street to gain access to the freeway, and when heavy congestion occurs on 101, traffic from these roads bypasses parts of the congestion by way of Magnolia Avenue and Doherty Drive in Larkspur and Tamal Vista Boulevard, Tamalpais Drive and Corte Madera Avenue in Corte Madera. Some of the southbound traffic on the freeway exits at Fifer Avenue and then uses Tamal Vista Boulevard and Madera Boulevard as a bypass.

U.S. 101 is built to freeway standards from the Golden Gate Bridge to Sonoma County. It is an eight-lane freeway with two auxiliary lanes south of Tamalpais Drive, with two of these lanes (HOV lanes) reserved for high occupancy vehicles, including carpools, buses and vanpools. U.S. 101 is an eight-lane freeway between Tamalpais Drive and Sir Francis Drake Boulevard (six lanes plus two HOV lanes), and is a six-lane freeway north of Sir Francis Drake Boulevard with no HOV lanes. The freeway currently operates at capacity during peak periods, with delays often taking place northbound at the Sir Francis Drake interchange due to the reduction in the number of freeway lanes from four to three.

In addition to the high traffic volumes, the design of the freeway and interchanges contributes to the congestion. Built in 1957, the U.S. 101 interchanges were not designed to accommodate current levels of traffic. Southbound, there are four interchanges (Sir Francis Drake, Lucky Drive, Madera Boulevard and Tamalpais Drive) over a distance of 1.5 miles, causing several "weaving" conflicts between vehicles entering the freeway and vehicles exiting the freeway at nearby downstream ramps. Within the Tamalpais Drive interchange, weaving problems exist between the on and off loops on both the northbound and southbound freeway lanes. East of the interchange, four roadways meet without benefit of a traffic signal (the northbound freeway exit, Tamalpais Drive, Paradise Drive and San Clemente Drive), resulting in a condition that is confusing and dangerous to both motorists and pedestrians.

STREETS. Most of Corte Madera's arterial streets have two lanes (one lane in each direction). Four-lane streets include Tamalpais Drive (east of Pixley Avenue), San Clemente Drive, Madera Boulevard, and portions of Paradise Drive.

Sir Francis Drake Boulevard and Second and Third Streets (a one-way couplet) are the only arterial routes through the Upper Ross Valley and San Rafael to and from the freeway. Traffic on these roads is extremely heavy. As a result, many motorists use Magnolia Avenue, Doherty Drive, and Lucky Drive to enter the freeway at Fifer Avenue in order to avoid Sir Francis Drake Boulevard during the commuter peak. Others continue on Corte Madera Avenue and then use Tamalpais Drive to gain access to the freeway. Some of these streets, particularly Corte Madera Avenue, are narrow residential streets not capable of handling this flow of traffic. This has caused safety problems to residents and bicyclists who also use the road and has interfered with the residents of the neighborhoods.



SOURCES: State of California, Division of Highways; Marin County Traffic Department; San Rafael Department of Public Works; Corte Madera Department of Public Works

FIGURE C-1
AVERAGE DAILY TRAFFIC VOLUMES, 1976 - 1979

90,000 Average Daily Traffic
 (9,800) Peak Hour Volume US 101

○ Interchange



TABLE C-1

ROADWAY LEVEL OF SERVICE CONCEPT

LEVEL OF SERVICE A

Volume/Capacity Ratio = 0-.59

Free flow conditions
Low volumes
High operating speed
Uninterrupted flow
No restriction on maneuverability
Drivers maintain desired speeds
Little or no delays at intersections

LEVEL OF SERVICE B

Volume/Capacity Ratio = .60-.69

Stable flow condition
Intersection is occasionally fully utilized
No vehicle waits through more than one red light

LEVEL OF SERVICE C

Volume/Capacity Ratio = .70-.79

Stable flow but speed and maneuverability restricted
by higher traffic volumes
Satisfactory operating speed for urban conditions
Vehicles may have to wait through more than one red light

LEVEL OF SERVICE D

Volume/Capacity Ratio = .80-.89

Approaching unstable flow
Low speeds
Vehicles may have to wait through more than two red lights
Little freedom to maneuver

LEVEL OF SERVICE E

Volume/Capacity Ratio = .90-.99

Lower operating speeds
Volumes at or near capacity
Unstable flow
Vehicles may have to wait through three or more red lights;
long lines at intersections

LEVEL OF SERVICE F

Volume/Capacity Ratio = 1.00 or greater

Forced flow conditions; intersection completely jammed
Low speeds
Volumes below capacity, may be zero
Vehicles may be stopped for long periods because of backups from
locations downstream or on cross streets.

Other motorists using U.S. 101 exit at the Fifer Avenue-Lucky Drive interchange and use Tamal Vista Boulevard and Madera Boulevard through Corte Madera. This has greatly increased traffic volumes along these roads since 1974.

THE LEVEL-OF-SERVICE CONCEPT. The quality of service provided by a roadway system is measured by comparing the capacity of the system with the traffic volumes that actually use the system. "Levels-of-Service" are used to describe the types of traffic conditions associated with various levels of traffic volumes versus capacity. There are six Levels-of-Service, Levels A through F, which describe driving conditions from best to worst, respectively. The traffic conditions associated with these various Levels-Of-Service are summarized in Table C-1.

Level-of-Service "D" is defined as a condition approaching unstable traffic flow, where speeds and maneuverability are restricted. At this Level-of-Service, traffic conditions have deteriorated to the point where, for example, drivers may have to wait through several traffic signal cycles to clear an intersection. For the purposes of the Corte Madera General Plan, Level-of-Service "D" in the 30th highest peak hour of each year is an acceptable service level for the street network during peak periods. Traffic conditions worse than this service level may warrant roadway improvements or a diversion of traffic to other routes, as more specifically discussed on pages C-10 and C-11.

EXISTING LEVELS-OF-SERVICE. As of 1980, several intersections of local streets were operating near capacity during the peak hour (4:30 - 5:30 P.M.) The stop-sign controlled intersection of Madera Boulevard and Mohawk Avenue was operating at 94 percent of its maximum capacity, or at Level-of-Service "E". The intersection of Nellen Avenue, Fifer Avenue and the south-bound freeway ramps on the west side of U.S. 101 was operating at 90 percent of its capacity during the peak hour, or Level-of-Service "D/E". Corte Madera Avenue at Redwood Avenue was operating at Level-of-Service "D". All other intersections were operating at Level "C" or better.

In addition, weaving sections on northbound U.S. 101 between the Tamalpais Drive on and off loops and the weaving section on southbound U.S. 101 between the Sir Francis Drake Boulevard on-ramp and the Lucky Drive off-ramp were both operating at Level-of-Service "E" during the peak hour. The southbound U.S. 101 weaving section between the Tamalpais Drive on-loop and off-loop was operating at Level-of-Service "D" during the evening peak hour.

PUBLIC TRANSIT. The Golden Gate Bridge, Highway and Transportation District (GGBHTD) provides local (Marin Transit) and commute bus service to Corte Madera. Commuter routes operate on peak hour schedules only, while local routes operate throughout the day. In 1980, two commuter routes and two local routes operated on local streets within the study area. A total of 14 commuter routes and one local route operated on U.S. 101 through Corte Madera and stopped at "bus pads" at the Lucky/Industrial and Tamalpais/Paradise interchanges. Regularly scheduled ferry service to San Francisco was also available from Tiburon, Larkspur and Sausalito.

The Golden Gate Bridge District has periodically studied the possibility of up-grading commuter service by employing exclusive rights-of-way with the possibility of eventually converting the bus system to rail. Future studies may determine alignment and mode in Marin, possibly involving the use of U.S. 101, the Northwestern Pacific Railroad right-of-way, or a combination thereof. In the meantime, the District is utilizing an exclusive bus lane operating along U.S. 101 in the lane not experiencing peak hour flows. That is, a southbound lane is used for northbound buses during the evening commuter peak in Southern Marin over the Waldo Grade. This has substantially reduced travel time for this heavily congested portion of the freeway.

An agreement in June, 1973 between the District and the San Francisco Municipal Railroad (Muni) has allowed passengers to stop prior to downtown and connect with Muni buses and reach such work destinations as Kaiser Hospital, Sears, and University of California Medical Center and St. Joseph's Hospital. The route also facilitates transfers to other main San Francisco corridor routes. This should result in increased commuter use of the bus system since 58 percent of all Corte Madera residents working in San Francisco are employed in other than the central business district.

PARKING. Present Zoning Ordinance regulations require one covered off-street parking space and one uncovered off-street parking space for each single-family residence and one and one-half spaces to two-and one-half for each unit in multiple dwellings. In 1970, half of all occupied Corte Madera households had two or more automobiles available to them, and it is likely that this percentage has increased.

PEDESTRIANS AND BICYCLES. Pedestrian and bicycle access throughout Corte Madera is limited and often unsafe. Access between east and west Corte Madera is extremely hazardous over the Tamalpais Drive interchange since the only sidewalks provided are for bus stops at the freeway elevation. There is a vehicular underpass at the railroad tracks, corresponding to William Avenue, but this is far from the eastern residential population and includes no pedestrian or bicycle paths. Since most of the Town's services and facilities are located west of the freeway, the use of these facilities by residents living on the east side is often limited to those with automobiles. One of the most affected groups are children wishing to use the Town Park or Public Library. Development of recreational trails has also been sparse. There are few hiking trails in the ridges which separate Corte Madera from Tiburon, Larkspur and Mill Valley.

FUTURE CONDITIONS

FREEWAY AND STREETS. In 1980, the Town inventoried all future development likely to occur in Corte Madera and Larkspur in conformance with the present general plans and zoning ordinances (Wilbur Smith & Associates) Corte Madera Traffic Impact Study). The Traffic Impact Study looked at the traffic that would be generated on the 30th highest peak hour of each year and calculated the effect on the intersections and interchanges in the Town.

The study found that, if all planned development took place and no improvements were made in local streets, most of the intersections in Town would operate at Level-of-Service "D", "E", or "F" in the 30th highest peak hour of each year, as shown on Table C-2. Thus, congestion on local streets would be much more severe than existed in 1980.

PEDESTRIANS AND BICYCLES. If all the planned development takes place and no pedestrian and bicycle facilities are installed, conflicts between automobile traffic and bicycle and pedestrian movements would occur in several locations. At the Tamalpais/U.S. 101 interchange, conflicts would occur between automobiles using the freeway ramps on the southeast and northwest quadrants of the interchange and pedestrians who must cross these ramps to reach the freeway "bus pad" transit stops. The proposed Hahn project could generate many pedestrian trips across Tamalpais Avenue east of U.S. 101, including people wishing to reach the center from the bus pads and from west Corte Madera. As of 1980, there were no crosswalks between the south and north sides of Tamalpais Drive east of U.S. 101.

Any expansion of the Corte Madera Center could cause pedestrian conflicts at the intersection of Madera Boulevard and Tamalpais Drive. As of 1980, there were no provisions for crossing the east leg of this intersection. Potential conflicts between automobiles and bicycles could occur at the entrance to the Corte Madera Center from northbound Madera Boulevard.

SPECIFIC CIRCULATION POLICIES

Specific circulation policies for Corte Madera are generally illustrated in the Circulation Element Map. These policies focus on the policies enumerated at the beginning of this Element and expand the objectives into specific recommendations for: the improvement of the freeway and its interchanges; local roadways; transit; designation of scenic roadways; and pedestrian and bicycle circulation. The goal of all recommendations is to provide a sufficient choice of transportation modes for all residents so that they may travel at maximum safety and minimum cost. This goal attempts to cause minimum disturbance to the natural and man-made

TABLE C-2

LEVELS-OF-SERVICE AFTER FULL DEVELOPMENT
ASSUMING NO TRAFFIC IMPROVEMENTS ARE MADE
(30TH HIGHEST PEAK HOUR)

LEVEL-OF-SERVICE "F"

Nellen Avenue/Redwood Highway
Tamal Vista Blvd/Fifer
Nellen Avenue/Fifer
Mohawk/Madera
Paradise Drive/Tamalpais Drive
Redwood Avenue/Corte Madera Avenue
Southbound weaving section between Sir Francis Drake
Blvd. and Lucky Drive
Northbound and southbound weaving sections on U.S. 101 between
Tamalpais Drive on-loops and off-loops

LEVEL-OF-SERVICE "E"

Paradise Drive/San Clemente Drive

LEVEL-OF-SERVICE "D"

Lucky Drive/Fifer Avenue
Eastbound and westbound weaving movements on Tamalpais Drive overpass

LEVEL-OF-SERVICE "C"

Tamalpais Drive/Madera Blvd.
Southbound weaving section on U.S. 101 between Madera Blvd and
Tamalpais Drive

LEVEL-OF-SERVICE "B"

Madera Blvd/Tamal Vista Blvd.

environment by: (1) reducing town automobile usage; (2) preventing a decrease in Levels-of-Service on local streets; and (3) improving Levels-of-Service wherever possible. The satisfaction of this goal will add to the safety of residents, reduce air pollution and noise levels, and enhance the livability of established older neighborhoods. A narrative description of the policies shown in the Circulation Element follows

FREEWAY IMPROVEMENTS. Plans of the California Division of Highways to increase U.S. 101 from six to eight lanes by adding two HOV lanes from Sir Francis Drake Blvd. to California 37 is recommended as appropriate for the Town, but Corte Madera should strongly oppose any future plans to widen the freeway beyond these eight lanes. These extra lanes are necessary to relieve some of the present congestion, but continued expansion of the freeway will only serve to perpetuate the reliance on the private automobile. While it is generally recognized that the automobile will remain the major transportation mode within the foreseeable future, an increase in traffic congestion and a shortage of economical parking in major employment centers will force people to use transit. By making it easier to drive through a continual program of freeway widening, the chances of achieving a viable transit system for inter-county and intra-county travel is remote. Furthermore, Marin County cannot afford to devote much more of its land for automobile travel purposes, nor can the county allow an increase in automobile-induced air and noise pollution. The energy crisis, with impending increases in gasoline prices and possible shortages, will force more people to rely on public transit, particularly for commuting.

Any and all modifications of the existing improvements within the State Highway right-of-way should be coordinated for conformity with the Town's General Plan.

LOCAL ROADWAYS. The 1980 Traffic Impact Study showed that the capacity of local streets would be exceeded if Corte Madera and Larkspur were completely developed in conformance with their General Plans, and no street improvements were constructed. Besides causing long delays to local motorists, this would tend to decrease air quality, increase noise levels, encourage drivers to detour into residential areas, and increase conflicts with pedestrians and bicyclists.




To ensure that this does not happen, the Town has adopted a series of policies guaranteeing that traffic generated by new developments does not exceed the capacity of local streets. These policies are:

1. The Town will use the 30th highest peak hour of each year as the criterion for measuring traffic impact.
2. In evaluating traffic impact, the Town will include the effects of traffic generated by all existing and planned projects in the area, including projects in both Corte Madera and Larkspur.

3. The Town will strive to obtain service levels of no worse than level "D" in the 30th highest peak hour of each year. The Town may be willing to accept level "E" if it cannot identify feasible and acceptable mitigation measures, without substantial adverse impacts, to obtain level "D".
 - a. This criterion applies only to intersections of local Corte Madera streets and does not apply to weaving movements on U.S. 101 between on and off-ramps or to streets or intersections in Larkspur.
 - b. The Town will require locally acceptable mitigation measures for any local Corte Madera intersection not meeting this criterion.
 - c. No project may be approved unless acceptable off-site and on-site traffic improvements are proposed which will achieve acceptable levels of service.
4. Costs of all traffic improvements required to achieve acceptable levels of service should be shared by all new projects based upon the traffic generated by each project.
5. All traffic improvements should be designed to discourage the use of local roadways and residential streets by commuters during peak hours.
6. All traffic improvements should be designed to be consistent with the small-town scale and character of Corte Madera and to maintain the natural appearance of the surrounding hills and ridges. Landscaping and trees should be used wherever possible. Wherever possible, improvements should be installed within existing rights-of-way.
7. New offices and other commercial developments should not exceed an intensity of 14,000 to 15,000 square feet per gross acre, which was the maximum intensity assumed in the Corte Madera Traffic Impact Study. This figure could be modified if new studies demonstrate that local streets do have adequate capacity for more intense development consistent with Corte Madera's small-town character.

The improvements to major collector streets listed below may be necessary to achieve acceptable levels of service. Any final decision on the need for these improvements will depend on a review of detailed engineering studies and designs demonstrating that the improvements will be consistent with the policies of this section.

Figure 1 Potential Housing Sites

-  LOW DENSITY RESIDENTIAL
(0-2 dwellings/acre)
-  MEDIUM DENSITY RESIDENTIAL*
(2-6 dwellings/acre)
-  HIGH DENSITY RESIDENTIAL*
(over 7 units/acre)

1. Independent Learning School
2. Uplands II
3. Triangular Marsh
4. Ring Mountain
5. Catholic Archdiocese
6. Corte Madera Community Church
7. Granada School
8. Hidden Valley Ranch
9. Koch (Mixed Use)
10. Meadowsweet (Infill)
11. Masada
12. Villa Madera
13. Hahn (Mixed Use)
14. Village Square (Infill)
15. Paradise East
16. Site Adjacent to Paradise Shopping Center
17. The Shores

* Permitted densities may be higher if they conform to adopted land use intensity criteria and may be lower for sites with significant environmental constraints.

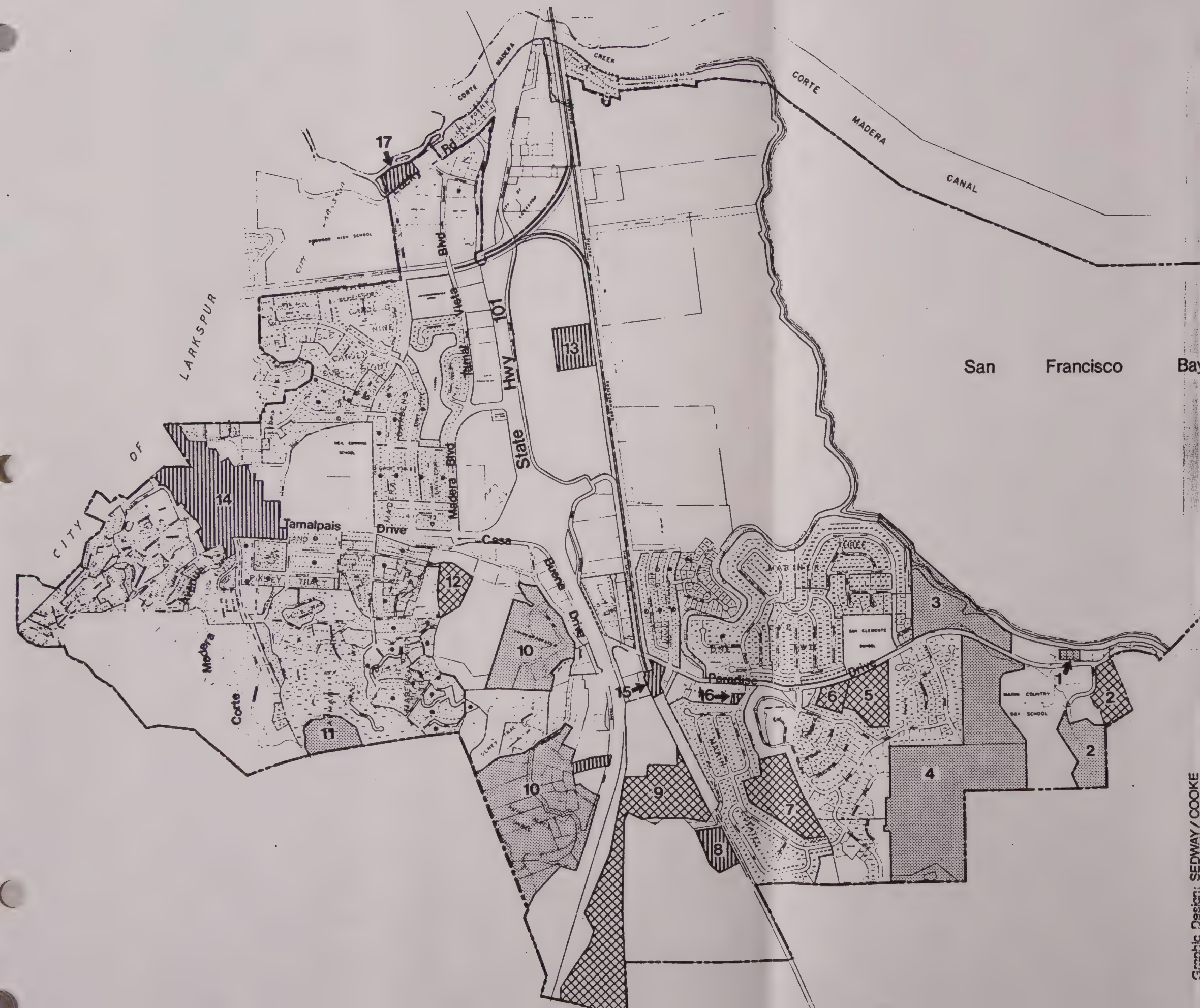
Corte Madera Housing Element

LYNN SEDWAY & ASSOCIATES

0 1000 2000 ft



Graphic Design: SEDWAY / COOKE



Future studies may demonstrate that some of these improvements are not desirable and that improvements not listed here are needed.

1. Signalization of the following intersections:
 - a. Tamalpais Drive at San Clemente Drive
 - b. Madera Blvd. at the proposed South entrance to the Corte Madera Center
 - c. Tamal Vista Blvd. at Fifer Avenue
 - d. Redwood Highway at Nellen Avenue
 - e. Paradise Drive at Harbor
2. Construction of a ring road around the Easterly perimeter of the proposed Hahn Shopping Center.
3. Widening of Tamalpais Drive and San Clemente Drive at their intersection to six lanes.
4. Widening of Madera Blvd. between Tamalpais Drive and the south entrance of the Corte Madera shopping center to six lanes.
5. Restructuring the intersection of Madera Blvd. with Tamal Vista Blvd. and Council Crest Drive to improve safety and make the intersection less confusing to the driver. Any modifications should retain the landscaped island which serves as a buffer between the shopping center and residents.
6. A signal at Redwood Avenue at Corte Madera Avenue may be appropriate if it will not encourage through traffic to Sir Francis Drake Blvd. and will not impede local traffic.
7. Widening Fifer Avenue and Lucky Drive at their intersection may be acceptable if only minimal landscaping is removed on the northeast side of Fifer Avenue.
8. Extending the east-west section of Nellen Avenue to Tamal Vista Blvd., including bike paths and sidewalks. This would be appropriate only if substantial benefits are provided and traffic on Tamal Vista Blvd. is not substantially increased.
9. Modifying the Tamalpais interchange into a partial cloverleaf configuration, including widening of the overpass and modifications to the Paradise-Tamalpais intersection. This may be acceptable, pending further studies of congestion on local streets and travel time between east and west Corte Madera. Some modifications to the Paradise-Tamalpais intersection will be needed whether or not the partial cloverleaf intersection is constructed. Any signals installed on Tamalpais Drive should be programmed to favor traffic flowing between east and west Corte Madera.
10. Modifications to the Tamalpais Drive/Madera Blvd. intersection to improve traffic operation and safety.
11. Upgrading San Clemente Drive to a landscaped, median-divided roadway.

The following policies for residential streets are also adopted to minimize the intrusion of vehicular traffic into residential areas:

1. William Avenue (the railroad right-of-way) west of Tamal Vista should not be developed for powered vehicles;
2. The access road to the area commonly referred to as Madera del Presidio should be generally located in the former railroad right-of-way, but should leave the right-of-way to intersect with Paradise Drive approximately opposite Harbor Drive.
3. No local streets should be extended or widened to serve any presently undeveloped area over the objections of adjoining or affected property owners including, but not limited to: Sausalito Street to Scott Valley; Endeavor or Westward to the Deffebach Property; Corte Madera Avenue to the Northridge; William Avenue to Magnolia; Harbor or Echo Drive to the Muzzi Property;
4. Alta Way, Chapman Drive and Sausalito Street should not be improved to such an extent that they would be viable alternatives for traffic between Mill Valley and the Freeway.

TRANSIT. The Town should encourage plans of other agencies to improve public transit so that it offers all residents a viable alternative to the automobile to the extent that the system is consistent with environmental quality aims and the improved livability of the neighborhoods.

While communities in Marin County are not in a position to implement a county-wide transit plan, they can endorse plans of regional agencies and influence the county and the Golden Gate Bridge, Highway and Transportation Districts to provide necessary and desirable services. Also, communities should promote circulation patterns which facilitate higher transit use. Each local jurisdiction will be asked to approve right-of-way for any intra-county transit system in their community and, therefore, the communities should adopt specific policies in advance. These policies and recommendations for Corte Madera follow:

1. Provide an exclusive right-of-way for transit in the corridor of U.S. 101 as soon as feasible. If possible, the exclusive bus right-of-way should be designed to permit its conversion to a rail or other high-speed, high-capacity system in the future;
2. Provide a transit station in the U.S. 101 corridor. This station will be equally accessible to all Corte Madera residents and would be located adjacent to commercial areas where parking arrangements could be made between the Transit District and the property owners. This location will also encourage people to use transit for shopping purposes as well as for commuting;
3. Investigate the feasibility of providing local shuttle transit service within Corte Madera to the transit station and shopping facilities, as well as to other social and community services in the Town and in adjacent communities;
4. Areas should be designated for (a) car-pool passenger pickup and delivery and (b) discharge and pickup of bus passengers transferring to or from private automobiles;
5. Bus shelters should be provided at any transit stops.

SCENIC ROADWAYS AND HIGHWAYS. State law now requires that general plans include a scenic highway element for the establishment, development and protection of scenic highways. Designating such highways enables the local jurisdiction to protect the scenic and historic assets of the area through which a state highway passes. Likewise, a local jurisdiction can designate local routes as scenic roadways and can establish similar design criteria for the lands adjacent to the rights-of-way.

In Corte Madera there are four streets which now possess or have the potential to possess those attributes which would qualify them to be local scenic roadways. They are Paradise Drive, Tamalpais Drive and Corte Madera Avenue. San Clemente Drive should also be included because it provides the connection between Paradise Drive and Tamalpais Drive. All of these are portions of the arterial street system in Corte Madera. Highway 101 has the potential of becoming a scenic highway through Corte Madera and through the rest of Marin County.

The following describes the proposed routes. The Circulation Element recommends their designation, whereas the section on Community Appearance and Environmental Quality recommends design principles and standards to maintain their scenic attributes.

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As of 1980, construction of two HOV lanes north of San Rafael had high priority for use of state highway funds. However, the state will not fund interchange or other improvements required because of new development.

FEDERAL-AID-URBAN (FAU) PROGRAM. This is the major federal program for funding transportation improvements of county-wide significance.

FEDERAL URBAN MASS TRANSPORTATION GRANTS. These grants can be used for two purposes: (1) capital expenditures such as acquisition, construction, or improvement of public transportation facilities and (2) demonstration projects. These grants may be applied to the inter-county transit system as operated by the Golden Gate Bridge District as well as an intra-Town shuttle transit service in Corte Madera.

GENERAL FUNDS. The Town could appropriate monies from its general fund, via the annual Capital Improvement Program, for local transportation improvements. The General Fund should only be used for the improvement of transit, bicycle, and pedestrian access and for beautifying existing streets.

OPEN SPACE FUNDING. The open space funding mechanisms outlined in the Open Space, Conservation, and Recreation Element could be used for the acquisition and construction of the pedestrian and bicycle trails described in this Element.

SAFETY AND SEISMIC SAFETY ELEMENT

Adopted January 3, 1978

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*Entire Element amended January 3, 1978.

INTRODUCTION AND PURPOSE

Because of the concerns of the Seismic Safety and Safety Elements of the General Plan Overlay, they have been combined into one element for the Corte Madera General Plan. The Seismic Safety Element is authorized by Government Code Section 65302(f) and requires identification and appraisal of seismic hazards and unstable geologic areas, as well as the effects of seismic activity such as tsunamis, faulting, ground shaking and ground failures. The Safety Element is authorized by Government Code Section 65302(q) and requires that the Town specify ways to protect its residents from fire and geologic hazards.

The objectives of these elements are to make each California community aware of its safety problems and to encourage adoption of developmental and emergency planning practices designed to reduce loss of life, injuries, property damage and economic and social dislocation which might otherwise result from future disasters. These elements identify major hazard areas in Corte Madera, assess existing protection services and suggest options the community might pursue to improve its level of public safety.

PURPOSE

The safety and seismic safety goals of Corte Madera are as follows:

1. To identify areas where geologic and seismic conditions, fire, and other hazards pose a potential threat to public safety.
2. To protect residents from dangers to life and property caused by seismic, geologic, and other hazards.
3. To provide an adequate level of public and private emergency services as well as access to those services.

CONCEPT OF RISK. In one way or another, every community determines the level of risk it is willing to accept. Usually this determination occurs unconsciously as bond issues are voted on for fire stations or flood control projects, or when levels are established for municipal services. While service cost is important in determining the level of risk a community is willing to assume, it is not the only factor. Knowledge of potential hazards and methods of their reduction also are important.

The combined Seismic Safety and Safety Elements examine the potential public safety hazards in Corte Madera in terms of whether the level of risk they present is acceptable, unacceptable or avoidable. An unacceptable risk is one in which the chance of loss of life or property is so high that specific action by government is determined to be necessary to reduce the risk. An avoidable risk is one which can be eliminated by some reasonable action and therefore does not need to be tolerated.

Corte Madera's potential safety hazards identified in these elements should be examined in the light of the type of risk they present. The policy and implementation sections of the elements will address actions which can be taken by the Town to avoid potential safety hazards and will identify those risks which are unacceptable and require specific risk-reduction action.

OBTAINING THE NECESSARY INFORMATION. Corte Madera, along with several of the incorporated communities in Marin County joined with the County and the California Division of Mines and Geology (CDMG) in a cooperative program of geologic mapping and geologic hazards identification. This study was published in 1976 as Geology for Planning, Central and Southeastern Marin County, California (Salem J. Rice, Theodore C. Smith, and Rudolph G. Strand), and serves as the basis for the evaluation of seismic and geologic hazards in the Town's Planning Area.

In addition, the federal Department of Housing and Urban Development prepared maps showing areas subject to flood hazard, while the San Francisco Bay Region Environment and Resources Study prepared maps of tsunami hazard. Information regarding relative fire hazard was obtained from the Fire Chief. A complete bibliography is available in the Town Planning Department offices.

EXISTING HAZARD CONDITIONS

GEOLOGIC SETTING OF CORTE MADERA

The Bay side of southern Marin County, where Corte Madera is located, consists of two geologic terranes:


1. upland terrane of hills and ridges with generally steep slopes, and
2. lowland terrane with two subdivisions: valley lands and bay lands.


The valleys are relatively narrow and have gentle slopes which merge into the flat lands bordering the bay. Figure S-1 "Ground Failure and Seismic Hazards", identifies these three geologic terranes.


Ground Failure and Seismic Hazards




 Bay Margin: Potential Erosion Hazard


 Bay Mud Thickness; Approximate, in feet

 Baylands Underlain by Bay Mud: Potential Static Settlement & Seismic Liquefaction

 Valley Lands; Undetermined Potential for Seismic Liquefaction

 Upland Terrane; Potential for Landslides: Ground Slope under 20%


 Ground Slope 20-39.9%

 Ground Slope over 40%

Note: Ground slopes as shown are approximate. For more detail refer to U.S.G.S. topographic maps.

May 1977

The Town of
CORTE MADERA
California

 Ironsides & Associates
Planning Consultants

Note: For more detailed location of landslide areas, see following map on file in City Planning Dept.: Interpretation of the Relative Stability of Upland Slopes in the Tiburon Peninsula, Sausalito, and adjacent areas, Marin Co., Cal., 1976; prep. by Cal. Div. of Mines and Geology

Future studies may demonstrate that some of these improvements are not desirable and that improvements not listed here are needed.

1. Signalization of the following intersections:
 - a. Tamalpais Drive at San Clemente Drive
 - b. Madera Blvd. at the proposed South entrance to the Corte Madera Center
 - c. Tamal Vista Blvd. at Fifer Avenue
 - d. Redwood Highway at Nellen Avenue
 - e. Paradise Drive at Harbor
2. Construction of a ring road around the Easterly perimeter of the proposed Hahn Shopping Center.
3. Widening of Tamalpais Drive and San Clemente Drive at their intersection to six lanes.
4. Widening of Madera Blvd. between Tamalpais Drive and the south entrance of the Corte Madera shopping center to six lanes.
5. Restructuring the intersection of Madera Blvd. with Tamal Vista Blvd. and Council Crest Drive to improve safety and make the intersection less confusing to the driver. Any modifications should retain the landscaped island which serves as a buffer between the shopping center and residents.
6. A signal at Redwood Avenue at Corte Madera Avenue may be appropriate if it will not encourage through traffic to Sir Francis Drake Blvd. and will not impede local traffic.
7. Widening Fifer Avenue and Lucky Drive at their intersection may be acceptable if only minimal landscaping is removed on the northeast side of Fifer Avenue.
8. Extending the east-west section of Nellen Avenue to Tamal Vista Blvd., including bike paths and sidewalks. This would be appropriate only if substantial benefits are provided and traffic on Tamal Vista Blvd. is not substantially increased.
9. Modifying the Tamalpais interchange into a partial cloverleaf configuration, including widening of the overpass and modifications to the Paradise-Tamalpais intersection. This may be acceptable, pending further studies of congestion on local streets and travel time between east and west Corte Madera. Some modifications to the Paradise-Tamalpais intersection will be needed whether or not the partial cloverleaf intersection is constructed. Any signals installed on Tamalpais Drive should be programmed to favor traffic flowing between east and west Corte Madera.
10. Modifications to the Tamalpais Drive/Madera Blvd. intersection to improve traffic operation and safety.
11. Upgrading San Clemente Drive to a landscaped, median-divided roadway.

The following policies for residential streets are also adopted to minimize the intrusion of vehicular traffic into residential areas:

1. William Avenue (the railroad right-of-way) west of Tamal Vista should not be developed for powered vehicles;
2. The access road to the area commonly referred to as Madera del Presidio should be generally located in the former railroad right-of-way, but should leave the right-of-way to intersect with Paradise Drive approximately opposite Harbor Drive.
3. No local streets should be extended or widened to serve any presently undeveloped area over the objections of adjoining or affected property owners including, but not limited to: Sausalito Street to Scott Valley; Endeavor or Westward to the Deffebach Property; Corte Madera Avenue to the Northridge; William Avenue to Magnolia; Harbor or Echo Drive to the Muzzi Property;
4. Alta Way, Chapman Drive and Sausalito Street should not be improved to such an extent that they would be viable alternatives for traffic between Mill Valley and the Freeway.

TRANSIT. The Town should encourage plans of other agencies to improve public transit so that it offers all residents a viable alternative to the automobile to the extent that the system is consistent with environmental quality aims and the improved livability of the neighborhoods.

While communities in Marin County are not in a position to implement a county-wide transit plan, they can endorse plans of regional agencies and influence the county and the Golden Gate Bridge, Highway and Transportation Districts to provide necessary and desirable services. Also, communities should promote circulation patterns which facilitate higher transit use. Each local jurisdiction will be asked to approve right-of-way for any intra-county transit system in their community and, therefore, the communities should adopt specific policies in advance. These policies and recommendations for Corte Madera follow:

1. Provide an exclusive right-of-way for transit in the corridor of U.S. 101 as soon as feasible. If possible, the exclusive bus right-of-way should be designed to permit its conversion to a rail or other high-speed, high-capacity system in the future;
2. Provide a transit station in the U.S. 101 corridor. This station will be equally accessible to all Corte Madera residents and would be located adjacent to commercial areas where parking arrangements could be made between the Transit District and the property owners. This location will also encourage people to use transit for shopping purposes as well as for commuting;
3. Investigate the feasibility of providing local shuttle transit service within Corte Madera to the transit station and shopping facilities, as well as to other social and community services in the Town and in adjacent communities;
4. Areas should be designated for (a) car-pool passenger pickup and delivery and (b) discharge and pickup of bus passengers transferring to or from private automobiles;
5. Bus shelters should be provided at any transit stops.

SCENIC ROADWAYS AND HIGHWAYS. State law now requires that general plans include a scenic highway element for the establishment, development and protection of scenic highways. Designating such highways enables the local jurisdiction to protect the scenic and historic assets of the area through which a state highway passes. Likewise, a local jurisdiction can designate local routes as scenic roadways and can establish similar design criteria for the lands adjacent to the rights-of-way.

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CALIFORNIA HIGHWAY FUND. This fund is used for the construction and improvement of all state roadways. This could include the widening and interchange reconstruction of U.S. 101.

As of 1980, construction of two HOV lanes north of San Rafael had high priority for use of state highway funds. However, the state will not fund interchange or other improvements required because of new development.

FEDERAL-AID-URBAN (FAU) PROGRAM. This is the major federal program for funding transportation improvements of county-wide significance.

FEDERAL URBAN MASS TRANSPORTATION GRANTS. These grants can be used for two purposes: (1) capital expenditures such as acquisition, construction, or improvement of public transportation facilities and (2) demonstration projects. These grants may be applied to the inter-county transit system as operated by the Golden Gate Bridge District as well as an intra-Town shuttle transit service in Corte Madera.

GENERAL FUNDS. The Town could appropriate monies from its general fund, via the annual Capital Improvement Program, for local transportation improvements. The General Fund should only be used for the improvement of transit, bicycle, and pedestrian access and for beautifying existing streets.

OPEN SPACE FUNDING. The open space funding mechanisms outlined in the Open Space, Conservation, and Recreation Element could be used for the acquisition and construction of the pedestrian and bicycle trails described in this Element.

SAFETY AND SEISMIC SAFETY ELEMENT

Adopted January 3, 1978

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*Entire Element amended January 3, 1978.

INTRODUCTION AND PURPOSE

Because of the concerns of the Seismic Safety and Safety Elements of the General Plan Overlay, they have been combined into one element for the Corte Madera General Plan. The Seismic Safety Element is authorized by Government Code Section 65302(f) and requires identification and appraisal of seismic hazards and unstable geologic areas, as well as the effects of seismic activity such as tsunamis, faulting, ground shaking and ground failures. The Safety Element is authorized by Government Code Section 65302(q) and requires that the Town specify ways to protect its residents from fire and geologic hazards.

The objectives of these elements are to make each California community aware of its safety problems and to encourage adoption of developmental and emergency planning practices designed to reduce loss of life, injuries, property damage and economic and social dislocation which might otherwise result from future disasters. These elements identify major hazard areas in Corte Madera, assess existing protection services and suggest options the community might pursue to improve its level of public safety.

PURPOSE

The safety and seismic safety goals of Corte Madera are as follows:

1. To identify areas where geologic and seismic conditions, fire, and other hazards pose a potential threat to public safety.
2. To protect residents from dangers to life and property caused by seismic, geologic, and other hazards.
3. To provide an adequate level of public and private emergency services as well as access to those services.

CONCEPT OF RISK. In one way or another, every community determines the level of risk it is willing to accept. Usually this determination occurs unconsciously as bond issues are voted on for fire stations or flood control projects, or when levels are established for municipal services. While service cost is important in determining the level of risk a community is willing to assume, it is not the only factor. Knowledge of potential hazards and methods of their reduction also are important.

The combined Seismic Safety and Safety Elements examine the potential public safety hazards in Corte Madera in terms of whether the level of risk they present is acceptable, unacceptable or avoidable. An unacceptable risk is one in which the chance of loss of life or property is so high that specific action by government is determined to be necessary to reduce the risk. An avoidable risk is one which can be eliminated by some reasonable action and therefore does not need to be tolerated.

Corte Madera's potential safety hazards identified in these elements should be examined in the light of the type of risk they present. The policy and implementation sections of the elements will address actions which can be taken by the Town to avoid potential safety hazards and will identify those risks which are unacceptable and require specific risk-reduction action.

OBTAINING THE NECESSARY INFORMATION. Corte Madera, along with several of the incorporated communities in Marin County joined with the County and the California Division of Mines and Geology (CDMG) in a cooperative program of geologic mapping and geologic hazards identification. This study was published in 1976 as Geology for Planning, Central and Southeastern Marin County, California (Salem J. Rice, Theodore C. Smith, and Rudolph G. Strand), and serves as the basis for the evaluation of seismic and geologic hazards in the Town's Planning Area.

In addition, the federal Department of Housing and Urban Development prepared maps showing areas subject to flood hazard, while the San Francisco Bay Region Environment and Resources Study prepared maps of tsunami hazard. Information regarding relative fire hazard was obtained from the Fire Chief. A complete bibliography is available in the Town Planning Department offices.

EXISTING HAZARD CONDITIONS

GEOLOGIC SETTING OF CORTE MADERA

The Bay side of southern Marin County, where Corte Madera is located, consists of two geologic terranes:

1. upland terrane of hills and ridges with generally steep slopes, and
2. lowland terrane with two subdivisions: valley lands and bay lands.

The valleys are relatively narrow and have gentle slopes which merge into the flat lands bordering the bay. Figure S-1 "Ground Failure and Seismic Hazards", identifies these three geologic terranes.

The Upland Terrane is underlain by a variety of bedrock types, which have been mapped in detail as part of the CDMG's study of Southern Marin. Generally, the hills on the east and west sides of Corte Madera are underlain by different types of bedrock. The Tiburon Peninsula Ridge east of Highway 101 is capped by sheets of serpentine that are separated from the underlying sandstones and shales by a thick zone call Franciscan melange. Melange is composed principally of small to very large hard rocks embedded in more or less intensely sheared and crushed rock material, and was formed by an ancient fault which is no longer active. Ring Mountain is geologically very complex and consists mainly of melange and serpentine rock.

West of Highway 101, the ridges and knolls are made up of Franciscan sandstone, and melange mainly underlies some of the lower slopes in the old parts of Town.

The valley lands of the Lowland Terrane, like portions of the Upland Terrane, have surficial deposits called alluvium or colluvium. Alluvium includes clay, silt, sand, and gravel which was deposited by streams; colluvium is a general term for deposits of unsorted soil material and rock fragments that accumulate on or at the base of slopes by gravity or rapid downslope movement.

The bay lands of the Lowland Terrane are deeply underlain by the bedrock of the old valleys, which are now filled by sediments. They include the bay plains, marshes, and mudflats of the Bay and are predominantly silt and clay transported from the east by the Sacramento River and deposited from Bay tide waters. These latter deposits are called Bay mud. This mud is a soft, unconsolidated, water-saturated silty clay, which also contains plant remains and mollusk shells. The extent and thickness of Bay mud in Corte Madera are shown on the "Ground Failure" map.

One significant geologic aspect of Corte Madera's lowlands is that the bedrock peninsulas and islands rise abruptly out of the marshlands. (The Water District's Corporation Yard is on one such island.) At their margins, the contrast is extreme: the hard bedrock on the one hand, and the very soft Bay mud on the other. Another aspect is manmade. The Lowland Terrane has areas of man-placed fill, especially in the bay lands.

SEISMIC HAZARDS

Because Corte Madera is relatively close to known earthquake faults, earthquakes of high magnitude* can be felt and cause damage in the area. While long-time residents of Corte Madera may feel that the area is relatively free of earthquakes, only small earthquakes have occurred in recent years in other parts of the Bay Area. Very large earthquakes, such as the one which occurred in 1906, were felt strongly in Corte Madera. *The magnitude of an earthquake indicates the amount of energy released and is constant for a given earthquake. The intensity of an earthquake describes its effects and the damage it causes and varies from place to place.

Figure S-2 "Earthquake History" shows those earthquakes which have caused moderately to extremely severe damage. There are no direct reports of damage incurred in Corte Madera as a result of major quakes.

As can be seen, most of the known severe earthquakes in the Bay Area occurred during the nineteenth and early part of the twentieth century. However, there is much evidence to indicate that the lull in earthquake activity during the past half century is temporary and that resumed seismic activity on a similar scale to the nineteenth century is probable during the coming decades.

Earthquakes may cause four types of hazards: (1) rupture of the ground surface along active faults. There are no known active faults in the Corte Madera Planning Area, and thus ground rupture is not a local hazard; (2) ground shaking, caused by the passage of seismic waves through the earth; (3) ground failure, which may include landslides in hillside areas and liquefaction in the areas underlain by Bay mud and other sediments, and which is often associated with fire and the disruption of utilities; and (4) tsunamis, or tidal waves.

The last three hazards are discussed below.

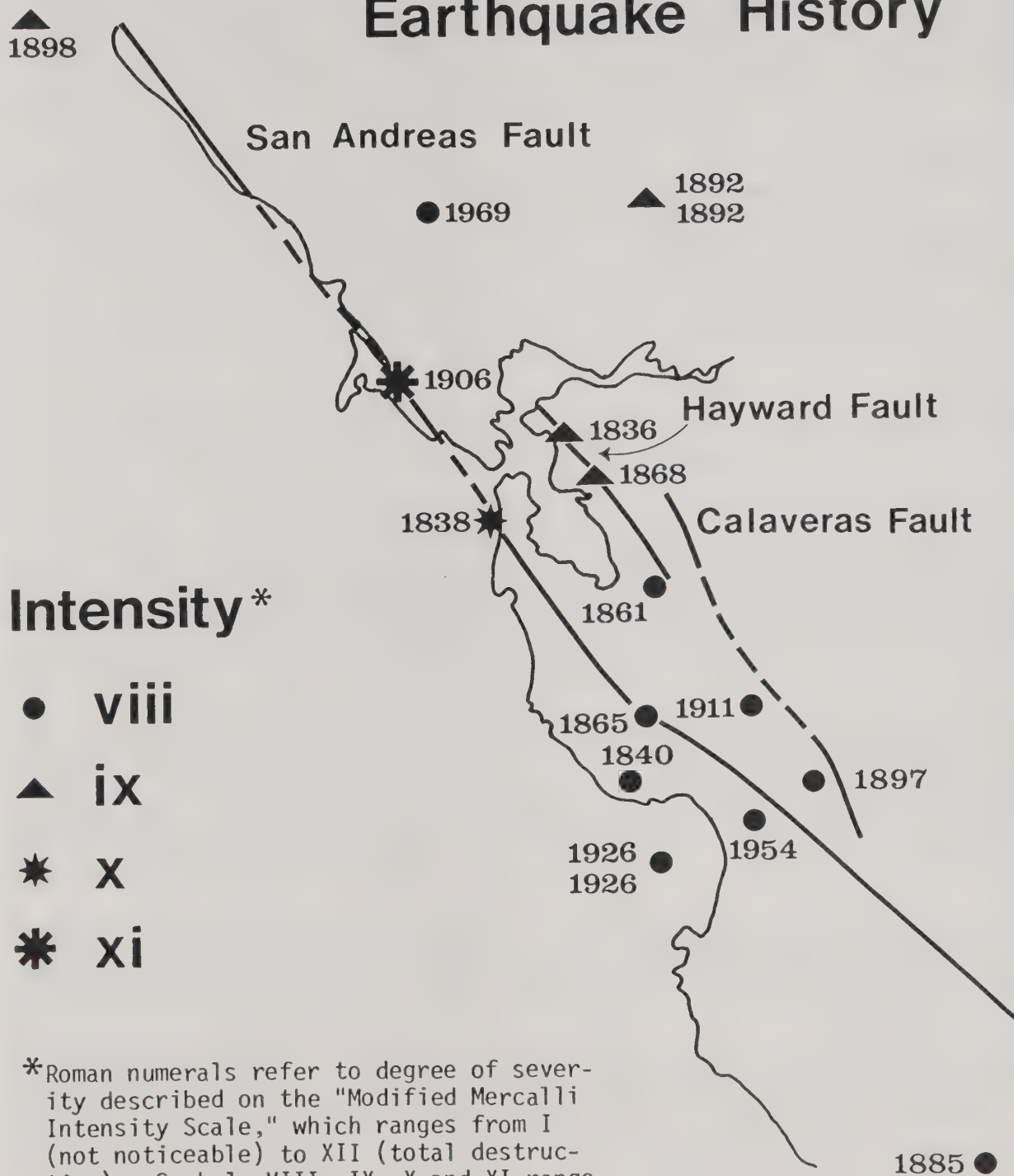
GROUND SHAKING. Seismic shaking has historically caused the most serious economic and human losses in earthquakes. Several factors influence the amount of ground shaking on any particular site. The principal ones are the characteristics of the earthquake itself (its magnitude and depth), the distance from the epicenter of the earthquake, and the local subsurface conditions. Data from past earthquakes show that the intensity of the ground shaking can be several times larger on sites underlain by weak sediments, such as Bay mud, than on bedrock. Thus, the greatest losses from shaking may occur where tall structures are built on thick, soft sediments, and least where they are built on firm bedrock.

Damage from shaking is also a function of the structural integrity of the buildings before the earthquake. Older structures, especially those built before 1933 (when improved codes were adopted) and those built of unreinforced masonry, are especially susceptible and may collapse during earthquakes. (Structural hazards are discussed below.)

No detailed information is available on the effects of ground shaking in Corte Madera during the 1906 earthquake. Thus, only a very general conclusion can be reached that damage to buildings and utilities is likely to be greatest on those sites underlain by deep, loose, compressible deposits such as Bay mud. These areas include the flatland residential neighborhoods built on fill in Corte Madera, including Madera Gardens, Marina Village, Mariner Cove, and parts of Marin Estates.

Figure S-2

San Francisco Bay Area Earthquake History



*Roman numerals refer to degree of severity described on the "Modified Mercalli Intensity Scale," which ranges from I (not noticeable) to XII (total destruction). Symbols VIII, IX, X and XI range from moderately severe to extremely severe.

Source: Altermissen, S.T., 1972, A Study of Earthquake Losses in the San Francisco Bay Area: Data and Analysis: U.S. Department of Commerce, National Oceanic Atmospheric Administration.

GROUND FAILURE AND OTHER SECONDARY EFFECTS. Ground failure is a secondary effect of ground shaking and generally includes any displacement of the ground surface due to a loss of strength of underlying materials during an earthquake. Ground failure includes landslides, liquefaction, lurching, and differential settlement. Some of these, particularly landslides and differential settlement, have occurred in the Town without an earthquake, and are also discussed under non-seismic hazards.

Liquefaction occurs when saturated, relatively clean and poorly consolidated granular material, such as sand, is shaken during an earthquake and is transformed into a fluidlike state similar to quicksand. If this happens, buildings can tilt or sink, lighter utility lines can rise to the surface, levees and bridge abutments can fail, and the ground may move laterally even on a very gentle slope. If soils are poorly consolidated, the ground may even subside during intense shaking. In past earthquakes, these effects have caused some of the most serious damage.

In Corte Madera, there is a potential for liquefaction of man-placed fill, Bay mud sediments, and alluvium. Thus, again, those neighborhoods built on filled Bay mud are most susceptible to this hazard.

Landslides involve the downslope movement of soil and rock and include a wide variety of materials and mechanisms ranging from rockfalls to earthflows. Earthquake-induced landslides will generally occur in the same marginally stable areas where landslides are caused by other conditions, such as heavy rainfall. However, the addition of energy from an earthquake may induce landslides that otherwise might not have occurred until a future rainy season.

The maps prepared by the CDMG classify the Upslope Terrane in Corte Madera by their relative Slope Stability, with "1" indicating the most stable areas, and "4" the least. Figure S-3 shows one portion of that map, which is available for reference in the Planning Department. Generally, the slopes of the Tiburon Peninsula Ridge are among the least stable areas, with scattered landslides west of Highway 101.

Fire is also likely to be a destructive by-product of a great earthquake in this area - perhaps by far the worst if the earthquake occurs during the dry season. It was the great fire in San Francisco that accounted for much or most of the property damage there from the earthquake of 1906.

Similarly, it should be expected that many fires would be ignited in Corte Madera from a major or great earthquake. These fires would probably be caused by gas appliance pilot flames which would ignite the gas escaping from ruptured pipes. (Fire hazards are discussed below.)

TSUNAMI. Tsunamis are large ocean waves generated by disturbances of the ocean floor, such as fault offsets associated with earthquakes. Tsunamis may travel for thousands of miles and cause damage both close to and well away from the epicenter. Most tsunamis which have caused damage in California have been generated by distant quakes.

When a tsunami enters a partly enclosed body of water, like San Francisco Bay, it is modified. The effect in a body of water such as San Francisco Bay is somewhat analogous to water sloshing back and forth in its container after being disturbed. Tide gages within bays indicate that the water level oscillates above and below the normal tide level for a given time interval, causing rapid currents and consequent damage to moored boats and marinas. A 1975 study estimates that tsunamis of a seven-foot height may occur on the average of once every 100 years in San Francisco Bay.

Figure S-4, "Flood and Tsunami Hazards", shows the parts of Corte Madera subject to tsunami hazards. These include portions of the Corte Madera and Muzzi marshes, part of Mariner Cove, the Triangular Marsh, and the bayfront lots along Paradise Drive.

NON-SEISMIC GEOLOGIC AND OTHER NATURAL HAZARDS

SLOPE INSTABILITY AND LANDSLIDES. Hill slope failure due to landslides, debris avalanches, and the like can occur without an earthquake. A description of this hazard in Corte Madera was undertaken as part of the CDMG's mapping project covering eastern Marin; Figure S-3 shows a portion of the maps prepared. As noted previously, the Division rated the relative stability of each slope in the Town.

Three factors were considered by the CDMG in evaluating the slope stability of various sites:

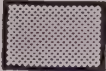

- The overall stability of the geological materials underlying the slopes.
- The steepness of the slopes.
- Groundwater and other natural forces that could cause slope failure.

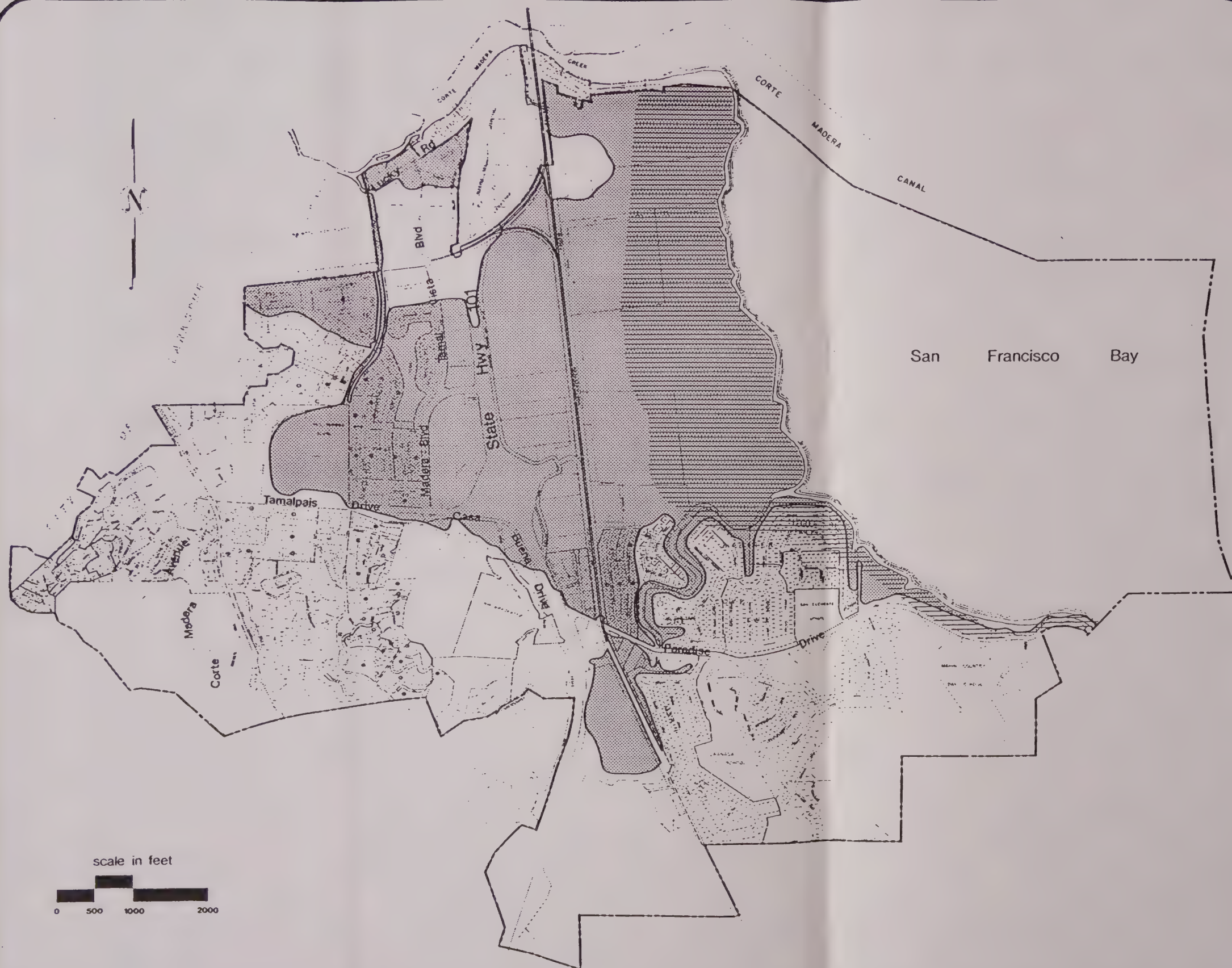
In addition to those, changes made by man may induce landsliding. These can include excavating too steeply, undercutting slopes or placing fills or structures on potentially unstable slopes.

As noted earlier, the portions of the Tiburon Peninsula Ridge underlain by melange tend to be among the least stable in the Corte Madera Planning Area. A large landslide was also induced west of U.S. 101 by the excavation of Alto Hill during the construction of the freeway.

In addition, scattered landslides have occurred in the hill areas west of Highway 101.

Flood and Tsunami Hazards

-  Potential Flood Area
-  Potential Tsunami Inundation Area



May 1977

The Town of
CORTE MADERA
California

 Ironside & Associates
Planning Consultants

FIGURE S-4

STATIC SETTLEMENT. As can be seen in Figure S-1, nearly all of the lowland portions of the Town are underlain by deposits of Bay mud. Development of these areas requires the placement of fill over the Bay mud, which causes that unconsolidated material to settle.

When fills are placed over thick Bay mud deposits, large amounts of settlement take place over periods as long as 100 years. This subsidence can make flatland areas subject to frequent flooding. Additional problems occur when the Bay mud varies in thickness over relatively short distances, and the amount of settlement varies between those areas. When this differential settlement occurs, tilted buildings, cracked walls broken streets, and utility breakage often result.

The Town of Corte Madera in 1977 reconstructed the streets, sidewalks, storm sewers, and sanitary sewers in the Marina Village area in order to correct problems caused by differential settlement. Periodic maintenance of sewers and streets has also been required in the Madera Gardens and Marin Estates areas to correct similar problems. Flooding of some businesses in the San Clemente-Paradise area has been due to past subsidence, and ponding of water at curbs during storms is another local consequence.

EROSION. Areas of erosion hazard have not been mapped in Corte Madera. However, a general review of local conditions indicates that soil cover on natural slopes is relatively continuous, except where resistant rock masses crop out at the surface or where the underlying rocks have been exposed in the heads of landslides. Therefore, erosion of bedrock materials on natural slopes is of minor consequence, since the rocks which are exposed are hard and resistant to erosion.

When cut slopes are created, the natural protective vegetation and soil cover is stripped away, and more readily erodible materials are often exposed. When Franciscan melange is exposed in a cut slope, the weak rock is fairly erodible and, over several years, a slope can become severely gullied if drainage ditches and planting are not employed. Hard blocks within the melange may work loose as surrounding material is washed away and tumble downslope. Soil materials exposed at the top of a cut slope are especially susceptible to erosion.

Finally, Corte Madera has a discrete area along the Bay margin which is subject to erosion. The prevailing wind direction is such that natural erosion is limited. Recent use of high speed ferry boats, however, apparently has created shoreline erosion. Further study would be necessary to determine the extent of this hazard.

FIRE HAZARDS. In Corte Madera, the factors which most contribute to the potential for fire are heavy vegetation, inadequate water supply, poor access, and the impact of an earthquake which would create these problems in areas which otherwise have no unusual potential for fires. Figure S-5, the Fire Hazard Rating Map, shows the relative fire hazard potential of all parts of the Town. The Map clearly indicates that the most hazardous areas are on the steeper slopes in the Christmas Tree Hill and Chapman Park areas and in the unincorporated Meadowsweet area.

Christmas Tree Hill and Chapman Park are residential areas picturesquely developed on the steep, tree-covered slopes of Northridge and Chapman Park facing San Francisco Bay. The Christmas Tree Hill area was first developed at the turn of the century as a vacation place for San Franciscans. Although new development has been added, the narrow streets and some of the water service of the early days remain in use. The tall trees and brush covered open spaces of Mt. Tamalpais also present a fire hazard.

Most of the Chapman Park area was developed after Christmas Tree Hill. Like its neighbor, this area lacks adequate fire fighting water storage capacity and has low water pressure and poor vehicular access, although not quite as poor as Christmas Tree Hill.

Within the Town's Sphere of Influence lies the developed, but unincorporated Meadowsweet area. Through its mutual aid agreement with Marin County, the Town's Fire Department will provide back-up after the County fire equipment has arrived on the scene. Unfortunately, the nearest County station is in Marin City, ten minutes or more away, south of U.S. 101. Response times can be even greater than ten minutes during morning and evening rush hours or when the northbound lanes of the Freeway are tied up for some reason. This is clearly unacceptable for a developed area.

In addition, the Meadowsweet area is susceptible to grass and brush fires from the ridge, as are part of Chapman Hill and Christmas Tree Hill. Uncontrolled fire in these unincorporated areas could threaten Town residents and property.

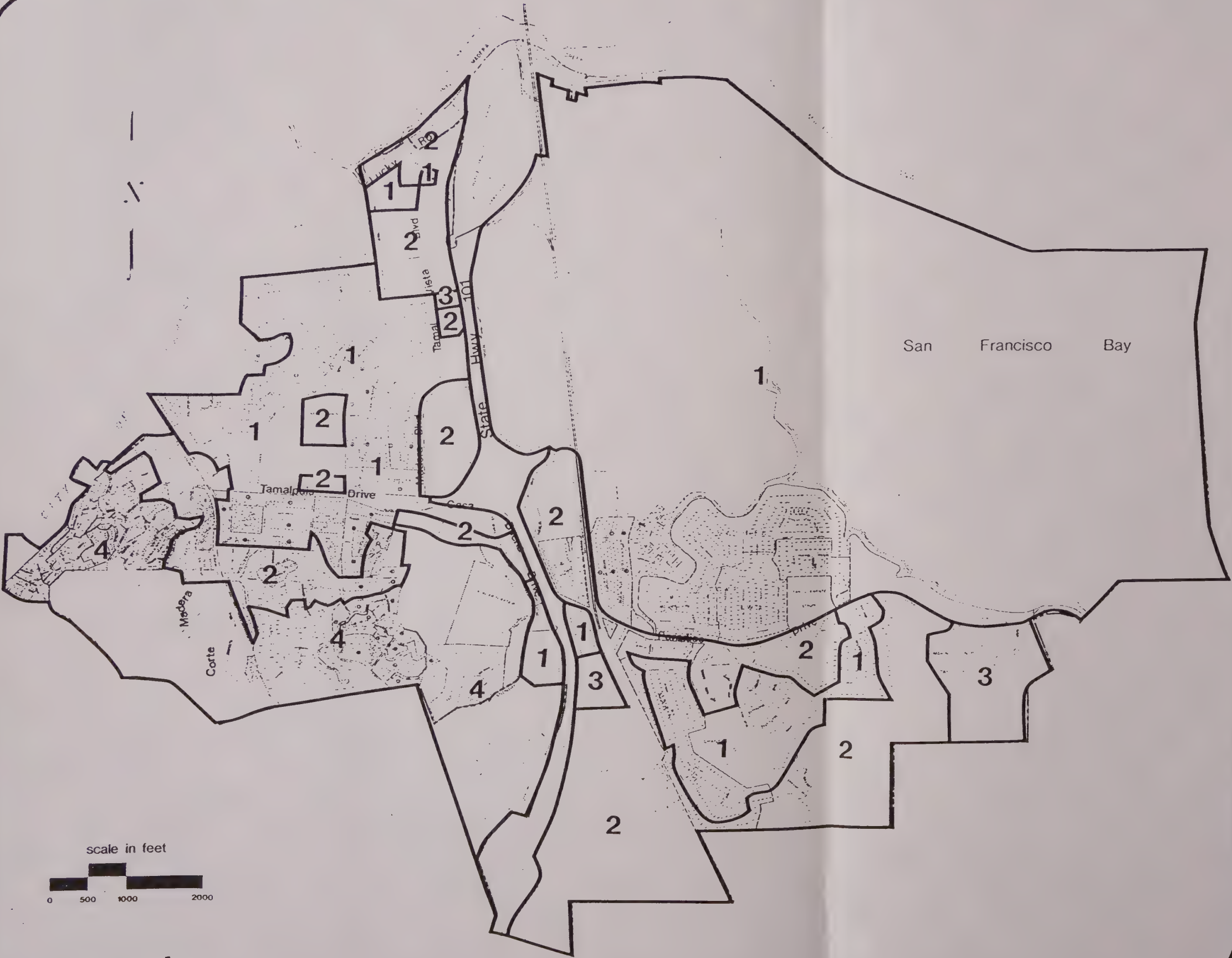
The Corte Madera Center is of older construction and was built before sprinklers were required for such development. Today, only half the public commercial areas and none of the attics are sprinkled.

The Upland Apartments are located on the east side of 101, up a steep grade, at the edge of the City's fire service area. These factors make response time to these new, modern apartments five or six minutes, much longer than the desired three minutes. Water capacity at the site is also insufficient. The current volume is 700-800 gallons per minute at the top of the Uplands, while the ISO recommends 4,200 gallons.

Very poor access for fire trucks to area of the Town east of Highway 101 could occur in an earthquake. This is discussed below under "emergency access".

Fire Hazard Rating

- 1 Low
- 2 Moderate
- 3 Moderately High
- 4 High



FLOODING. Flooding of lowland areas in Corte Madera is controlled through a complicated system of levees, dikes, and pump stations. Despite this network, flooding may occur due to either (or both) of two causes:

1. Power or equipment failure at the pump stations during a storm.
2. Very high tides accompanied by a strong wind, resulting in an exceptionally high tide which overtops the lower levees.

Earthquakes could also cause flooding by inducing levee failure or ground subsidence.

Figure N-4, "Flooding and Tsunami Hazards", shows the areas of flood hazard identified by the U.S. Department of Housing and Urban Development. These areas have a probability of flooding once each 100 years (or, a 1% chance each year) and tend to coincide with the areas underlain by Bay mud. They include the Madera Gardens and Marina Village Subdivisions and the Hahn, Koch, Lucky Drive, and San Clemente-Paradise commercial areas.

STRUCTURAL HAZARDS

Three types of structural hazards exist in Corte Madera: residential development which occurred before building codes were adopted in 1933; unreinforced masonry; and development which was not engineered for potential geologic hazards. Most of the old pre-1933 residential development in Corte Madera is located on Christmas Tree Hill and in the vicinity of Chapman Drive in Chapman Park. The old age of these structures is compounded by the steep slopes, narrow access road, and relatively high residential densities and occasionally by poor maintenance of structures.

Only one area in the Town has unreinforced masonry structures: Hart Street between Redwood Avenue and Tamalpais Drive. Although all the structures in this area are old, the grocery store structure is of particular concern.

Much of the newer residential development on the flatter portions of the Town is on filled Bay mud. (See Ground Failure and Seismic Hazard Map). Major structural problems have been caused by differential settlement, which has already been discussed. Despite engineering precautions in laying the fill, the methods were relatively unsophisticated, and the developed land throughout the area has settled at irregular rates. This uneven lowering of the surface has caused substantial structural damage in some cases.

RISK FACTORS IN CORTE MADERA

Table S-1 summarizes the hazards previously discussed. The "recurrence probability" indicates how likely a hazard is to recur, while the "recurrence frequency" shows how often it might occur. The "extent of the hazard" in Corte Madera indicates how large an area of the Town might be affected.

Table S-1

GEOTECHNICAL HAZARDS EVALUATION FOR CORTE MADERA

HAZARD	HISTORICAL OCCURRENCE			RECURRENT PROBABILITY	RECURRENT FREQ.			EXTENT OF HAZARD			CITY- WIDE IM- PACT	RISK REDUCT. PLAN		
	Not Recorded	Infre- quent	Fre- quent		Years			Limi- ted	Mod- erate	Wide- spread		Land Use	De- sign	Emer- gency Plan Controls
					50+	10-50	-10							
SEISMIC														
Fault Rupture of Ground	x			0		NA			NA		0		NA	
Damaging Ground Shaking		x		●	x					x	●	x	x	x
Ground Failure:														
Liquefaction	x			∅	x				x		∅	x	x	
Subsidence	x			∅	x				x		∅		x	
Landslides	x			∅	x				x		∅	x	x	
Tsunamis		x		●		x			x		0	x	x	x
NON-SEISMIC														
Landslides			x	●				x	x		∅	x	x	
Static Settlement			x	●		x			x		∅	x	x	
Erosion		x		●				x	x		0	x	x	
Flooding		x		●		x			x		∅	x	x	x
Fire Hazards			x	●				x		x	●	x	x	x
Structural Hazards	See text			∅		NA			x		●		x	

KEY: NA Not Applicable. 0 Low. ∅ Moderate. ● High

Finally, the "citywide impact of the hazard" shows the overall importance of each hazard. The risk reduction measures indicated include zoning, grading and building ordinances and a disaster preparedness program.

EXISTING PREVENTION AND EMERGENCY SERVICES

The primary services which respond to an emergency are fire and police, but there are additional services which are provided on a day-to-day basis and are not considered emergency services until a disaster has occurred: water supply and communications. Town codes and ordinances, circulation and emergency planning are also related to public safety. The purpose of this section is to describe the existing level of protection and identify problems associated with each aspect of public safety in Corte Madera.

FIRE. The Fire Department makes the initial attack on a fire. This requires that enough men and adequate water capacity for their pumps are available at the site of a fire. One measure of the Department's success in meeting this objective is its Insurance Service Organization (ISO) rating. In 1977 the Corte Madera Fire Department improved its rating from Class 6 to Class 4.

The Corte Madera Fire Department is run with professional fire fighters who are assisted by trained resident volunteers. Since Corte Madera is a commuter suburb, the resident volunteers are backed up by trained volunteers from the Town's Public Works Department, who assist the Fire Department during working hours.

Corte Madera has Automatic Response Agreements with the Tiburon and Alto Fire Departments. Under these agreements these two departments respond immediately to fires in designated portions of Corte Madera's fire service area and Corte Madera reciprocates in portions of their service areas. Marin County provides automatic response to grass, brush and forest fires in any jurisdiction bordering their lands.

All the fire departments in Marin County have a Mutual Aid Pact by which the local jurisdiction's fire fighters respond initially to a fire and, if they need assistance, call for assistance from other communities. The extent of mutual aid response depends upon the size of a fire and the type of aid required.

In addition to responding to fires, all the Town's fire fighters have first aid training, and, in fact, most of the calls to the Department are for first aid. Only about 25 percent of the calls to the Department are fire-related.

Fire prevention through education and fire code enforcement is an important aspect of the Corte Madera Fire Department's activities. Educational programs include extensive training of the volunteer firemen, public awareness programs, inspections on request and assistance to neighborhood associations who wish to reduce fire risks in their areas.

POLICE. The Corte Madera Police Department is staffed with sworn officers and owns and operates both marked and unmarked police cars, each equipped with a radio and an 8 channel scanner. These scanners allow patrolling officers to monitor the California Highway Patrol, Marin County Fire Department and Police Departments in adjacent cities broadcasts and to communicate directly with these agencies through the County Communication Center in San Rafael. The Town is divided into two patrol areas, roughly separated by Highway 101. A maximum response time of three minutes is provided within the incorporated limits.

The Police Department has an important role in emergencies. As do the fire fighter, all officers have advanced first aid training. The Corte Madera Police Department has Automatic Response Agreements with Tiburon, Belvedere, Larkspur, Mill Valley and Marin County. The Town also is part of the Marin County Police Mutual Aid Pact comprised of the police departments of the thirteen city departments and the County Sheriff.

In addition to the Town Police Department, the Marin County station for the California Highway Patrol (CHP) is located in Corte Madera, east of Highway 101. The specific responsibility of the CHP is to patrol the unincorporated County and State Highways. Their jurisdiction also include the Richmond-San Rafael and Golden Gate Bridges and the bridge approaches.

All cars are radio equipped and broadcast only on two of the four CHP frequencies monitored in San Francisco. These frequencies are separate from those of local police departments, making communication difficult in time of emergency. Some of the CHP's cars are equipped with radio scanning equipment, which enables them to listen to local police frequencies even though they cannot talk to them.

The CHP may respond with one-half of its on-duty officers to a life-threatening emergency in any community within Marin County and thus in a sudden crisis promptly back up the Corte Madera police force. However, the CHP does not respond until after mutual aid has activated one-half the on-duty personnel in the entire County and the County Sheriff has requested CHP assistance.

WATER SUPPLY. Domestic water is supplied to Corte Madera by the Marin Municipal Water District. Local storage is in eight tanks on six sites. The lower portion of the Town is served by gravity flow from the dams on Mt. Tamalpais. Storage tanks are placed at 200 to 300 foot intervals up the hills until they reach the highest point needed to serve development. Each tank is served by an electric pump which operates as necessary (about eight hours a day) to maintain the water level. There are no alter-

nate sources of power to operate these pumps. All pumping stations have emergency piping for pumping with mobile gas pumping units.

The major water supply problem in Corte Madera is that the existing storage capacity at elevations above 200 feet is generally less than ISO fire fighting standards, which require enough storage capacity to provide 1,000 gallons per minute for a two hour period in addition to water for domestic use. Tanks meeting this standard must hold 160,000 to 170,000 gallons of water, while several of the Town's tanks hold less than 50,000 gallons (see Table S-2).

The average age of the Town's storage tanks in 1977 was 17.75 years. The normal life expectancy of a wooden water tank is 20 to 25 years. Thus, many will need to be replaced soon. While this seems to be an ideal opportunity to provide the larger tanks needed to meet ISO standards, few sites are available in the developed areas which are large enough to accommodate tanks holding 150,000 to 170,000 gallons.

One of the most critical water service areas in Corte Madera is Christmas Tree Hill. The upper portion of the Hill has a storage capacity of only 35,000 gallons (including domestic water supply). Water service capacity is further limited by water mains and feeder mains laid in the early part of the century which have two to four inch diameters, far below the District's minimum six inch diameter. Some fire hydrants in the area have a capacity of as low as 250 gallons per minute, compared to an ISO recommended capacity of 1,000 gallons per minute. In addition, fire hydrants are irregularly spaced. Major improvement of the water supply for this area would require upgrading the entire system.

In preparing designs for new facilities the District checks with local fire chiefs to determine the supply required to fight fires. Thus, water supply problems should not occur in new developments, but in established areas where fire fighting requirements have increased but water service capacities are fixed and antiquated.

In addition, maintenance problems in Corte Madera occur in the areas built on fill. Because of soils and water table levels, pipes corrode here more rapidly than normal and require more frequent replacement.

COMMUNICATIONS. Pacific Telephone and Telegraph (P.T. & T.) provides basic telephone service to Corte Madera. The informal relationship among companies in the Bell System insures that compatible equipment, emergency back-up and service restoration will be available should a major disruption of service occur. In the event of emergency the company sets its own priorities on restoring service to critical emergency centers such as Emergency Operations Centers, Fire Departments, hospitals, etc.

In addition, the Fire Department may have a communications problem in an emergency. Because of the location and height of the Department's antenna on top of the Town's main fire station, there are dead spots in the service area where transmission from the station is cut off. In order to communicate with equipment in these dead spots the Town must transmit through the County Communications Center in San Rafael. In the event of a Countywide emergency, this service now volunteered by the County may be delayed.

Table 3-2

DESCRIPTION OF MARIN MUNICIPAL WATER DISTRICT STORAGE TANKS IN CORTE MADERA, 1977

<u>Name and Location</u>	<u>Capacity</u>	<u>Type</u>	<u>Surface Elevation</u>	<u>Height</u>	<u>Built</u>	<u>Areas Served</u>
Corte Madera First Lift (2) (Redwood Road)	30,000	Redwood	450	14	1954 1972	
Corte Madera Second Lift (Howard Trail off Summit)	12,000	"	657	14	1975	Christmas Tree Hill
Corte Madera Top (2) (End of Summit Drive)	5,000 30,000	" "	916	9 14	1928 1951	
Madera Park (Fairview Avenue)	100,000	"	499	20	1963	Chapman & Madera Park
Mariner Highlands (Above Endeavor Drive)	50,000	"	528	16	1964	
San Clemente (Granada & Endeavor)	1,500,000	Steel	293	27	1957	Mariner Highlands

Sources of Supply: Christmas Tree Hill upper elevations are served by the Southern Marin Line from the Bon Tempe Treatment Plant with Bon Tempe Dam as its source of water.

Chapman & Madera Park are served from the Sausalito and Federal Works Lines in the gravity system with water from Kent Lake through upper Ross Valley.

Mariner Highlands (the area east of Highway 101) is served from the same system as Chapman and Madera Park.

Corte Madera Adjacent to Highway 101 is served from the same system as the two above and also from the Larkspur-Greenbrae areas through the system along the west side of Highway 101.

The Corte Madera emergency plan Attachment C addresses the role of privately owned radio systems, equipment and facilities in the event of a national or natural disaster. The major methods of communications in Marin County in the event of a disaster are similar to those in other counties and include the Emergency Broadcast System (KNBR, 680 KH), and existing outdoor warning devices. The public safety building in the Town would be the focal point for local communications. Equipment would be handled by Police personnel.

CODES AND ORDINANCES. Corte Madera has adopted eight standard construction codes: Uniform Building Code, Uniform Plumbing Code, Electrical Code, Mechanical Code, Housing Code, Swimming Pool Code, the Hazardous Structures Code, and the Uniform Fire Code.

The Town has adopted its own grading ordinance in lieu of Chapter 70 of the Uniform Building Code and in addition has a smoke detector ordinance requiring the installation of smoke detectors in all rental units and when dwellings are sold or substantially modified. Automatic fire sprinkler systems are required in all buildings over 10,000 square feet and, in certain circumstances, in buildings between 5,000 and 10,000 square feet in area. Together these amendments address the major sources of life-endangering circumstances in the Town: Geotechnical hazards, residential fires, and fires in places where people congregate.

EMERGENCY ACCESS. Access in the event of a localized or Town-wide disaster is one of the most critical safety problems in Corte Madera. Many of the hillside areas of the Town were developed as vacation home developments for part-time use. To maintain their rustic character, only minimum access was provided, and these areas characteristically have steep, tree-covered slopes with one way both in and out. Today these houses have become year round residences, and additional development has placed extreme pressure on the old, substandard circulation system. The two areas of Corte Madera particularly affected are Christmas Tree Hill and the older portions of Chapman Park.

To alleviate the problem, the Town requires that a twelve-foot clear area be maintained for fire access on all Town streets. In addition, the Christmas Tree Hill Dwellers Association is establishing an identified pedestrian evacuation route along an interior trail system. This would help residents escape the area in the event of a disaster.

Another major emergency access problem could occur at the Paradise-Tamalpais overpass of Highway 101. Should this overpass fall or be blocked, egress from the developed residential area east of the Freeway would be difficult. Access could be established via the Greenbrae interchange to the north (providing it is still usable), or by breaking the Freeway fence and crossing the highway at grade. However, the Highway Patrol has been instructed to keep 101 clear of traffic in a major disaster. In any event, loss of the overpass would greatly extend the response time for Town fire and police emergency services, which are mainly located on the west side of the Freeway.

COMMUNITY APPEARANCE AND ENVIRONMENTAL QUALITY

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COMMUNITY APPEARANCE AND ENVIRONMENTAL QUALITY

PURPOSE

This section reviews scenic highways, as mandated by state law, and sets forth policies to assure an attractive community and a healthy local environment.

Community appearance is an important component of the Corte Madera General Plan. All too often, plans are developed with little concern for the natural and man-made visual aspects of an area, and ignore the visual effects of land use and transportation decisions. Corte Madera now enjoys a remarkable visual setting that must be preserved.

In addition to general policies concerning community appearance, this section provides recommendations for protecting the health and safety of residents through reducing air and water pollution. Although legislation needed to reduce pollution is the responsibility of the state and federal governments, Corte Madera can contribute toward that improvement by establishing and implementing policies that prevent further degradation of the environment and lower current pollution levels.

TOWN-WIDE POLICIES

The Town-wide policies include objectives to guide future public and private actions to maintain and improve the Town's appearance and environmental quality. It shall be the policy of the Town of Corte Madera:

1. To preserve the natural appearance of hills, ridgelines and other prominent or significant landforms, and to preserve the Town's wooded character;
2. To maintain the Town's relationship to San Francisco Bay by minimizing alteration of the shoreline, assuring public access, protection and enhancing Bay views, retaining the visual and open appearance of existing marshlands and shoreline grasslands and prohibiting the filling of the Bay and marshlands;
3. To preserve scenic views from all major public areas;
4. To safeguard areas and sites of historical and archeological significance;
5. To maintain the residential scale of the Town through the control of height, materials, and building forms;
6. To minimize the intrusion of vehicular traffic and its associated impacts into residential areas and to promote the safety of residents;
7. To stage development at a rate that can be readily absorbed into the physical scale of the Town;
8. To ensure that land use, structural design, signs, lighting and landscaping along scenic roadways are sensitive to their location;
9. To support efforts which promote higher air quality standards and to restrict air pollutant sources within the Town;
10. To limit development on land with erodable soils to a level which will not result in further degradation of water quality.

EXISTING CONDITIONS

The considerable scenic amenities of Corte Madera are readily apparent to the resident and visitor, but some problems do exist.

COMMUNITY APPEARANCE. Because Corte Madera contains water, hills and scenic vistas, the natural setting is a dominant element in the visual image of the Town. The setting plays an important role in determining where development should be located and in selecting major open spaces needed to retain the natural character of the Town.

RIDGETOPS. The ridges and hills separating Corte Madera from adjacent communities support many species of wildlife and plants and constitute a greenbelt. This greenbelt contributes to each community's identity by providing distinct town boundaries, which lessen the impact of highly urbanized areas. However, large portions of the ridge are in private ownership and much is unincorporated. Many of these areas have been proposed for residences even though the properties have geological features which may be hazardous to development.

SHORELINE AREAS. Although some of the shoreline and adjacent property is still natural, little has been done to enhance these areas or to provide public access to them. Views from the shoreline are impressive, and the aquatic vegetation and wildlife offers sharp contrast to the grasslands and trees of higher elevations. Some of the marshlands, including the Corte Madera Ecological Reserve, a small portion of the Muzzi Property, and the Triangular Marsh, look much the same as they did a hundred years ago. Only the Triangular Marsh is still privately owned.

VEGETATION. The initial impression of Corte Madera includes two distinct features: the heavily wooded vegetation in the west, and the open marshes, grasslands, and scarred hills in the east. Tree cover throughout the western hills and ravines is abundant and includes redwoods, oaks, eucalyptus and heavy underbrush. Planted trees and shrubs are also prevalent along the lower residential streets. The cut slopes east of the freeway support few trees, and the few that are present have been planted. The sparseness of the vegetation is further emphasized by the grassland expanses on the Tiburon Peninsula Ridge and the abundance of aquatic grasses in the open shoreline areas. Both of these provide a great contrast from the hills and ridges in the western portion of the Town. Landscaping is also sparse along the freeway and next to some of the more heavily traveled roadways. Planting is necessary to complement the natural visual setting and to buffer the non-residential development located along these roads.

VIEWS. From the Corte Madera Ridge, glimpses are available of San Francisco, the Bay and bridges, East Bay hills, the shoreline and marshes, the urbanized lowlands of Corte Madera and Larkspur, and the heavily wooded hills of the open space separating Corte Madera and Mill Valley. Views along the major transportation routes, though less expansive, also offer great variety in topography and texture. Westbound along Tamalpais Drive, Mt. Tamalpais and the heavily vegetated western hills of Corte Madera, with a sprinkling of houses partially hidden by trees, impart a sense of the natural and small-town scale of Corte Madera.

Eastbound along Tamalpais Drive, the East Bay hills offer a completely different scale and emphasize Corte Madera's unique setting in the region. However, this vista is marred by the severely cut slopes of the lower portions of the Tiburon Peninsula Ridge. These slopes were cut with little regard for the natural topography, erosion, plant cover and visual image.

Other roadways also provide variations in view and topography, including Corte Madera Avenue, Paradise Drive and U.S. 101. However, the lack of sufficient buffering, particularly along U.S. 101, has detracted from the views and the natural setting. Industrial and commercial development along portions of the freeway is not sensitive to the natural surrounding, and some of the service facilities look run down.

ENVIRONMENTAL QUALITY

The problem associated with air and water pollution cannot be isolated for Corte Madera because the issues are regional ones. However, the prevalence of pollution does have an effect on the health of residents and the quality of life in Corte Madera and, as such, becomes an important factor in the Corte Madera General Plan.

AIR QUALITY. The automobile is the major source of air pollution. Cars emit carbon monoxide, hydrocarbons, lead and other chemicals, and it has been shown that pollutant levels and trends closely follow traffic volumes. In general, levels are highest along the major routes of travel, such as U.S. 101 and Sir Francis Drake Boulevard. Other sources of pollution include residential and commercial heating systems and dust pollution, which is created

largely by highway and building construction.

In the June 1972 report, "Air Quality and Growth in Marin County", the Bay Area Air Pollution Control District (BAAPCD) assessed the air quality in the three Marin County air basins (Las Gallinas, San Rafael and Ross-Corte Madera basins). The BAAPCD projected the impacts of growth in the region and concluded that the current contaminant levels have remained low. Except for oxidants, levels rarely exceeded the air quality standards set by the state and federal government. This occurs despite the County's high pollution potential caused by the surrounding elevated terrain, the frequent low wind speeds, and the common formation of low-level air inversions. The low levels of air pollution in an area of relatively great pollution potential are due to the limited emissions within Marin, and Marin's favorable geographic position, upwind of major pollutant sources in the Bay Area.

WATER QUALITY. Pollution in San Francisco Bay generally results from the discharge of municipal, industrial and agricultural wastes. Damage is done by poisonous substances, residues that cause organic growth (algae), and by sewage that consumes oxygen in the water as it disintegrates. The resulting pollution can destroy both marine life and marine habitats in the water and along the shoreline and cause obnoxious odors and unsightly conditions.

In Corte Madera, the predominant source contributing to water pollution is urban runoff. Dust, litter, animal feces, lubricating oils, pesticides and other waste materials are generally found in urban runoff. A city of 5,000 to 10,000 inhabitants has an average contribution of 1.0 pound of BOD (biological oxygen demand) per mile of street per day.

The role of the marshes in reducing pollution is significant. They not only reduce the potential BOD loading to San Francisco Bay, but also serve as a trap for other undesirable storm water constituents. Suspended sediment, toxic heavy metals and plant nutrients may be detained permanently in marsh ponding areas.

SPECIFIC POLICIES AND DESIGN CRITERIA

Two maps have been prepared to illustrate the Community Appearance and Environmental Quality policies. The first is the Natural Features Map, Figure CEQ1, which denotes ridgetops, shoreline areas and significant vegetation which should be protected because of their contribution to the appearance of Corte Maera, their significant open space values, or their historic or archeologic sites. Figure CEQ1 also identifies areas where special programs to intensify street landscaping should be applied.

The second map, Design Review Areas, Figure CEQ2, identifies residential and non-residential districts where special design principles and standards are to be applied, and all development proposals are to be reviewed. This map also designates design corridors where additional review will be required if development occurs along scenic roadways and highways, or along the urbanized portion of the pedestrian/bicycle route. (Maps on file in the Community Services Department).

NATURAL FEATURES. The Open Space and Conservation Element calls for the preservation of lands which: are important natural habitats; contain scenic resources, including lands which are visually important to the setting of Corte Madera; are locations from which vistas of the hills, ridges, San Francisco Bay or East Bay are available; and are important archeological sites, such as Ring Mountain on the Tiburon Peninsula Ridge. In addition, lands with recreational resources are shown.

RIDGETOPS. Based on the above, it shall be the policy of Corte Madera to retain the ridgetops and substantial slope areas where possible in their natural state in order to preserve the wooded vegetation, significant habitats and grasslands, recreational potential, vista points and natural greenbelt separators between communities. If the rest of the ridge and hill areas cannot be publicly acquired - specifically the Tiburon Peninsula Ridge - and if development is permitted below the ridgetops, regulations should be established by the Town to ensure that the dominant natural character and attributes of the areas remain intact.

SHORELINE AREAS. It shall be the policy of Corte Madera to take all lawful steps toward retaining the remaining unfilled shoreline areas and marshes in their natural state and prohibit the further filling of San Francisco Bay. These areas are important for: maintaining wildlife, some of which are endangered; preserving water and East Bay views. The area should be designated primarily for natural habitat preserves and parks. Developments permitted near these shoreline areas should be sensitive to the unique setting and should be sited to minimize the blockage of views.

VEGETATION AND STREET TREE PLANTING. The importance of natural vegetation to the appearance of Corte Madera requires that the Town enforce a policy to retain vegetated areas in their natural state. This can be accomplished by prohibiting the removal of mature trees unless specific approval is granted by the Town. Programs should also be implemented to replant wooded and grassland areas which have been cleared of natural vegetation and to intensify the street tree planting program in the newer residential areas east of the freeway.

DESIGN REVIEW AREAS

Design Review Map, CEQ2, separates Corte Madera into areas within which specific design criteria should be developed to establish the character of that district. The Town's design review process should insure that new development observes the rules established for each of these areas.

DESIGN CORRIDORS. As recommended in the Circulation Element, Paradise Drive, Tamalpais Drive, San Clemente Drive and Corte Madera Avenue should be designated as local scenic roadways. These four roadways are the Town's major arterial streets, carrying the heaviest local traffic. In addition to the local scenic roadways, U.S. 101 should be designated as a scenic highway and become a part of the California scenic highway system.

Special design criteria should be established for each of these corridors once they have been designated as scenic roadways. Except for U.S. 101, criteria should specify that existing road widths be maintained where possible and that speed limits be kept low so that routes will be feasible for leisure driving. Standards should be developed dealing with adjacent land uses, protection of views from the route, landscaping, lighting and signing.

In addition to the scenic roadways, design corridors should also be established along the portions of the pedestrian/bicycle route which are in the urbanized sections of Town. This includes the railroad right-of-way in the western portion of Town, the area along Paradise Drive, and the proposed pedestrian connection over the freeway.

DESIGN DISTRICTS. The Town's residential neighborhoods and commercial districts each have their own character. Future developments should enhance the natural setting and complement adjacent land uses and public areas. The Town has been divided into design districts showing the boundaries of the residential neighborhoods and commercial districts. All future developments and other public and private improvements should be designed to be compatible with the existing buildings in each district.

Residential neighborhoods should be protected from the encroachment of incompatible new development. This will be particularly true in the older areas, where a specific character should be retained. Other considerations include the rehabilitation of older homes, the

maintenance of a circulation system that directs traffic around rather than through neighborhoods, the preservation of all mature trees, a program to encourage building upkeep, the compatibility of structural additions with the existing buildings, and the establishment of mini-parks where possible.

PUBLIC AREAS. A large portion of the Town is publicly owned, and the various agencies have the responsibility for designing and maintaining these areas to enhance the community. In Corte Madera these public areas, including parks, roadways and schools, comprise at least 40 percent of the total land area within the Town. The Town should devote special attention to the continued improvement, design, and maintenance of these areas. This includes: establishing specific design criteria and standards for street lighting, roadway design, street tree planting, street signing, pathways and other special details which reinforce the small-town scale, particularly along scenic roadways. In addition, they should assist in reinforcing the identity and function of the design districts identified in figure CEQ2.

AIR QUALITY. Since most air pollution is attributable to automobile emissions, the Town of Corte Madera should support all feasible programs to institute a rapid transit system in Marin County to reduce dependence on the private automobile. Any program for rapid transit must be countywide in scope and include intercounty as well as intracounty service, so that transit will be used for both the home-to-work trip and trips to stores, recreational facilities, and schools. Corte Madera should also promote intra-town service to connect residents with major Town services and stores. The system should be planned to eventually provide feeder service to a rapid transit system. The Town should also begin developing a complete bicycle trail system. Transit and bicycle policies and programs are more fully discussed in the Circulation Element.

The location of land uses can also do much to reduce dependency on the private automobile. The Community Services and Commercial Facilities Element provides for the retention of existing neighborhood shopping areas that are within a reasonable walking distance from most homes. This section also recommends an increase in employment opportunities in the Town.

WATER QUALITY. Two major policies should be instituted by Corte Madera to prevent further degradation of the water quality in San Francisco Bay. The first should be to control development on lands with erodable soils. Since the hill areas subject to erosion have not been well mapped, further investigation will be necessary to determine which areas should be included. Where the cutting of slopes does occur, proper restorative measures, such as the planting of compatible vegetative cover, should be employed. The second policy should be to

protect the remaining marshes and mudflats in their natural condition, to retain the remaining water volume and surface areas of the Bay by prohibiting any future filling, and to maintain the fresh water inflow into the Bay.

RECOMMENDED IMPLEMENTING APPROACHES

Several implementation mechanisms, already discussed in the Open Space and Conservation Element, will promote the objectives of this section. Specifically, a mandatory Planned Development District (PD) would implement a number of this section's policies.

Other objectives of this section, however, cannot be carried out by a PD procedure and require either the modification of existing Town regulations or the addition of new regulations and procedures. Some of these implementing approaches are identified below.

DESIGN REVIEW ORDINANCE. The Town's present design review procedures should be thoroughly revised so that design review takes place during the initial planning and design stages. At present, design review occurs after the applicant has nearly completed his final design and, consequently, the review process is devoted almost entirely to minor architectural details rather than to the major considerations of siting, relationship to adjoining areas or features, building massing and scale, height, and consistency of building and landscape materials.

The Town should prepare and adopt explicit statements of community design objectives for the design districts illustrated on CEQ2 and use these as the basis for design review. This approach has two distinct advantages. First, it provides the applicant with a clear statement of required conditions before most design work is initiated and, second, it gives sound criteria for design review approval.

DESIGN CORRIDORS. Development within design corridors will be subject to more stringent criteria and must be compatible with both the design objectives of the district and with the scenic attributes of the roadway, highway or pedestrian/bicycle trail. Generally, the design corridor should extend 300 feet in both directions from the right-of-way, although exceptions may be appropriate in specific locations. Some of the criteria which should be considered are listed below:

1. Building heights and setbacks should vary depending upon location, views and scenic factors.
2. Unsightly uses such as storage yards and parking lots should be eliminated unless they are adequately screened from public view by fences and landscaping.
3. Sign controls should limit the size, height, number, and type of signs. Any signs which block scenic views should be prohibited, and no billboards should be permitted.
4. Insofar as practicable, all new utilities should be underground, including water storage facilities, and existing overhead lines within design corridors should be given undergrounding priority by the Town. Top priority should be given to those areas where citizens are willing to participate financially.
5. Grading or earthmoving operations should be done with minimum ground disturbance and result in natural forms. Vegetative cover native to the area and other screening devices should be employed to cover scars and blend with the natural landscape.
6. Existing trees and other plant materials of significant value should be preserved.

SIGN ORDINANCE. The Corte Madera Zoning Ordinance contains provisions regulating the size of signs for commercial development, prohibiting flashing and moving signs, and requiring review of all permanent signs. However, the ordinance is uniform for an entire zoning district and does not take into consideration the specific area and the setting in which a sign is placed.

The sign ordinance should be amended to conform with the new design districts. These amendments should clearly recognize that type, siting and size of signs can vary according to the function of the area, the manner in which the sign viewer experiences the sign (e.g., as a motorist or pedestrian), and the area's relation to other districts or features.

HERITAGE TREE ORDINANCE. Since the Town's setting depends on the forested appearance of its hillsides and the established landscaping in the older residential areas, provisions should be made to protect these trees. The Town should establish a Heritage Tree Ordinance which would provide the means to identify and protect older specimens, and to forbid the removal of any tree over a certain height and width, unless certain findings are made.

Although no part of the ordinance, another program would be the private forestation of the residential streets in east Corte Madera.

The homeowners associations in the area should be responsible for managing the project and should choose hardy, low-maintenance trees for the neighborhoods with perhaps six varieties. Individual homeowners would pay for the trees and planting, but the Town should be responsible for the tree maintenance, particularly pruning.

CAPITAL IMPROVEMENT MANUAL. The Town's own capital improvement program can provide an influential means for shaping and enhancing the community's environment. It is proposed that the Town devise and adopt standards for such public improvements as roadways, street lighting, street signing, street furniture (including bus shelters), pathways and street trees. The intent should be to promote a high standard of design which will enhance public and private areas. This effort should be thoroughly coordinated with the Town's park plans, the various school district's plans for school sites and facilities, the transit district's plans, and plans of other governmental bodies responsible for public improvements.

NOISE ELEMENT

Adopted January 3, 1978

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INTRODUCTION

Noise in urban and suburban areas has been increasingly recognized as a serious problem in the United States. We are all frequently subjected to intrusive and offensive sounds from highway traffic, trains, airplanes, and construction equipment. Too-high noise levels have been shown to produce sleep disturbances, stress, annoyance, and interference with sleep. Noise also has an adverse economic effect; in many noise-impacted areas, property values have fallen drastically.

In response to this concern, the State of California in 1972 adopted (and in 1975 amended) Government Code 65302 particularly requiring a Noise Element in all city and county general plans. (See Appendix N-2). The Code is directed toward noise produced by transportation sources, and requires that noise contours be produced showing noise levels associated with major transportation facilities. Thus, a major product of this noise element is a map which shows sources of noise in the Corte Madera Planning Area. Using this map, citizens can identify areas impacted by noise and the severity of the noise problem in those areas. In addition, the Element recommends ways to reduce existing noise levels and to ensure that new development is both compatible with noise levels and does not increase those levels.

PURPOSE OF THE NOISE ELEMENT

The Noise Element of the General Plan provides a basis for comprehensive local programs to reduce and control excessive noise. The purposes of the Noise Element are:

- To provide information concerning community noise levels so that noise may be considered in the land use planning process.
- To develop strategies for reducing excessive noise.
- To protect those areas whose existing noise levels are considered acceptable and also those locations considered "noise sensitive," such as schools and rest homes.
- To require new developments to meet certain standards for appropriate noise levels and to ensure that all feasible measures are taken to mitigate noise impacts caused by new roads, road widenings, and new developments.

EXISTING AND FUTURE CONDITIONS

To evaluate existing noise levels produced by transportation sources in the Town, an acoustical engineer monitored noise at 16 locations in Corte Madera (see Appendix N-5) and produced noise contours for all major roads, freeways, the Northwestern Pacific Railroad Spur, and the Larkspur Ferry. These contours were produced for both 1977 and 1990 conditions, and Figure N-1 shows the 1977 and 1990 contours for the entire Corte Madera Planning Area. These contours give very useful information regarding noise levels in the Planning Area. Before their meaning can be completely understood, however, the way noise is measured must first be explained.

Noise Measurement

Noise is usually measured in decibels. Decibels measure the pressure generated by the movement of sound waves - called sound pressure. Because the human ear is sensitive to an extremely wide range of sound pressure levels, the decibel scale is logarithmic. It ranges from 0 to 140; zero decibels is the lowest level of sound detectable by the human ear, while a jet aircraft at takeoff generates 120 decibels.

It is important to remember that decibels are logarithmic, meaning that a change in decibel level represents a sizeable change in noise level. For example, a 10 decibel (dB) sound is 10 times louder than 0 decibels, while 20 dB is 100 times as loud as 0 dB. Thus, reducing the decibel level slightly may reduce the actual sound level by one half. As a general rule, increasing a noise level by 10 dB makes a sound twice as loud to the average listener. A noise level must be increased by at least threedecibels before most people perceive any significant change.

In addition, the total amount of noise generated by two separate noise sources is not computed by simply adding the decibels from each source. For instance, the total noise produced by two jet aircraft, each producing 120 decibels, is not 240 decibels. It instead totals 123 decibels. Table N-1 shows the decibel ratings of certain common sounds.

TABLE N-1

DECIBEL RATINGS OF COMMON SOUNDS

(Robert Baron: Tyranny of Noise)

<u>Source</u>	<u>dB(A)</u>
Helicopter flying overhead	100 - 90
Diesel truck	85 - 80
Vacuum cleaner	75 - 65
Normal speech	70 - 55
Daytime residential noises	50 - 60
Night-time residential noises	40 - 50

A further complication in this Noise Element is that decibel readings have been weighted according to the Day - Night Average Level (Ldn) Scale. This Ldn scale

averages noise levels on a 24-hour basis and adds ten decibels to nighttime noise (10 PM to 7 AM). This is because nighttime noise is much more disturbing than is daytime noise. The Ldn scale has been used by the State of California to establish certain noise standards, and, to maintain consistency, the noise contours included in the Element are also shown in terms of Ldn.

Though time and effort have gone into the development of the noise contours shown in Figure N-1, it is best not to think of them as absolute lines of demarcation like topographic contours. The state-of-the-art of acoustical engineering is such that noise contours are usually no more accurate than 1 to 3 decibels. Thus, they should be considered as illustrating relative noise levels, rather than as absolute numbers.

Noise Standards

Before deciding which areas in Corte Madera have "excessive" noise levels, it is necessary to determine a set of standards for noise in residential, commercial, industrial, and other areas. The definition of noise standards is not an exact science. Standards for noise levels have been published by many different governmental agencies, professional groups and advisory committees, and they are not all alike.

Some attempt has been made to associate noise standards with the results of physiological and psychological studies of noise. For instance, hearing damage can be expected in areas where sound levels over 90 dB(A) persist over a long period of time. Similarly, at levels of 85 dB(A) and above, blood pressure and heart rates increase. These are extremely high noise levels, however, and rarely occur in outdoor noise environments such as exist in Corte Madera.

Psychological effects, however, can be noticed at lower levels. Noise levels above 50 or 60 decibels disrupt normal conversation. Levels above 35 to 45 decibels affect the sleep cycle, causing awakening or changes in sleep state. People exposed to noise at night frequently report feeling tired the next day, even though they may not recall being disturbed by noise.

As part of its Noise Element Guidelines, the State of California has produced a Land Use Compatibility Chart (Table N-2) showing how acceptable various land uses are in various noise environments. For instance, the chart shows that single-family homes are normally acceptable where the noise level is less than 60 Ldn; conditionally acceptable at 60 to 70 Ldn; normally unacceptable at 70 to 75 Ldn; and clearly unacceptable at over 75 Ldn. The standards allow approximately twice as much noise in commercial and industrial areas as in residential areas.

Because the levels used by the State seem reasonable based on psychological studies, it is proposed that these levels be utilized as a standard for all new construction in the Corte Madera Planning Area.

TABLE N-2

Land Use Compatability for Community Noise Environments

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L _{dn} OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL - LOW DENSITY SINGLE FAMILY, DUPLEX, MOBILE HOMES	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
RESIDENTIAL - MULTI. FAMILY	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
TRANSIENT LODGING - MOTELS, HOTELS	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
AUDITORIUMS, CONCERT HALLS, AMPHITHEATRES	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
PLAYGROUNDS, NEIGHBORHOOD PARKS	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
INDUSTRIAL, MANUFACTURING UTILITIES, AGRICULTURE	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
LEGEND						
NORMALLY ACCEPTABLE		Normally Acceptable	NORMALLY UNACCEPTABLE		Normally Unacceptable	
CONDITIONALLY ACCEPTABLE		Conditionally Acceptable	CLEARLY UNACCEPTABLE		Clearly Unacceptable	

Noise Problems in Corte Madera

Present Transportation Noise. The noise contour map (Figure N-1) included in this Noise Element shows all those areas with 1977 noise levels exceeding 55 Ldn in the Corte Madera Planning Area. Areas with readings of 65 decibels or higher are shaded lightly; those with readings of 70 decibels are shaded in a darker tone.

As can be seen, U.S. Highway 101, Tamalpais Drive, and Tamal Vista Blvd. are the most intense sources of high noise levels in the Town. They are characterized by high traffic volumes and relatively high speeds and carry relatively large amounts of traffic at night. All of those areas with noise levels over 70 decibels in the Corte Madera Planning Area are located adjacent to these routes. Noise problems are particularly severe where homes are sited on hill-sides above the freeway; the largest impacted area, Meadowsweet, is located there.

While noise levels along Tamalpais Drive and Tamal Vista Blvd. are over 70 decibels for their entire length, fewer homes are affected. This is because the road is at grade and houses adjacent to the road shield those behind them. Where the houses are elevated above the freeway, houses near it cannot provide this "barrier effect".

Corte Madera Avenue, Madera Blvd., Paradise Drive, and Lucky Drive are also major sources of noise. They carry less traffic than the three streets listed above, and thus have lower noise levels. In addition, the buildings next to the road shield those behind them very successfully; only those homes directly next to the road suffer from excessive amounts of traffic noise. Nonetheless, because so many homes do front on these streets, they constitute a major contribution to excessive noise.

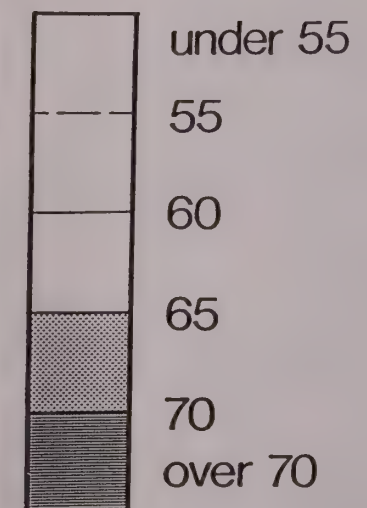
The Larkspur Ferry Terminal now creates noise in excess of 60 decibels only for those homes at the eastern end of the Greenbrae Boardwalk. However, the Ferry's overall noise impact can be expected to rise in the future when expanded services are initiated. While the individual noise caused by each Ferry will not increase, residents' exposure throughout the day will be longer.

The Northwestern Pacific Railroad maintains a spur track in the northern portion of the Town, extending westerly to Tamal Vista. The Railroad's only customer in the Town is Handi-Kup, which is served by eight to ten trains per month with one or two cars per train. This activity does not create significant noise levels, since the Ldn is less than 60 dB 100 feet from the track at the edge of the railroad right-of-way.

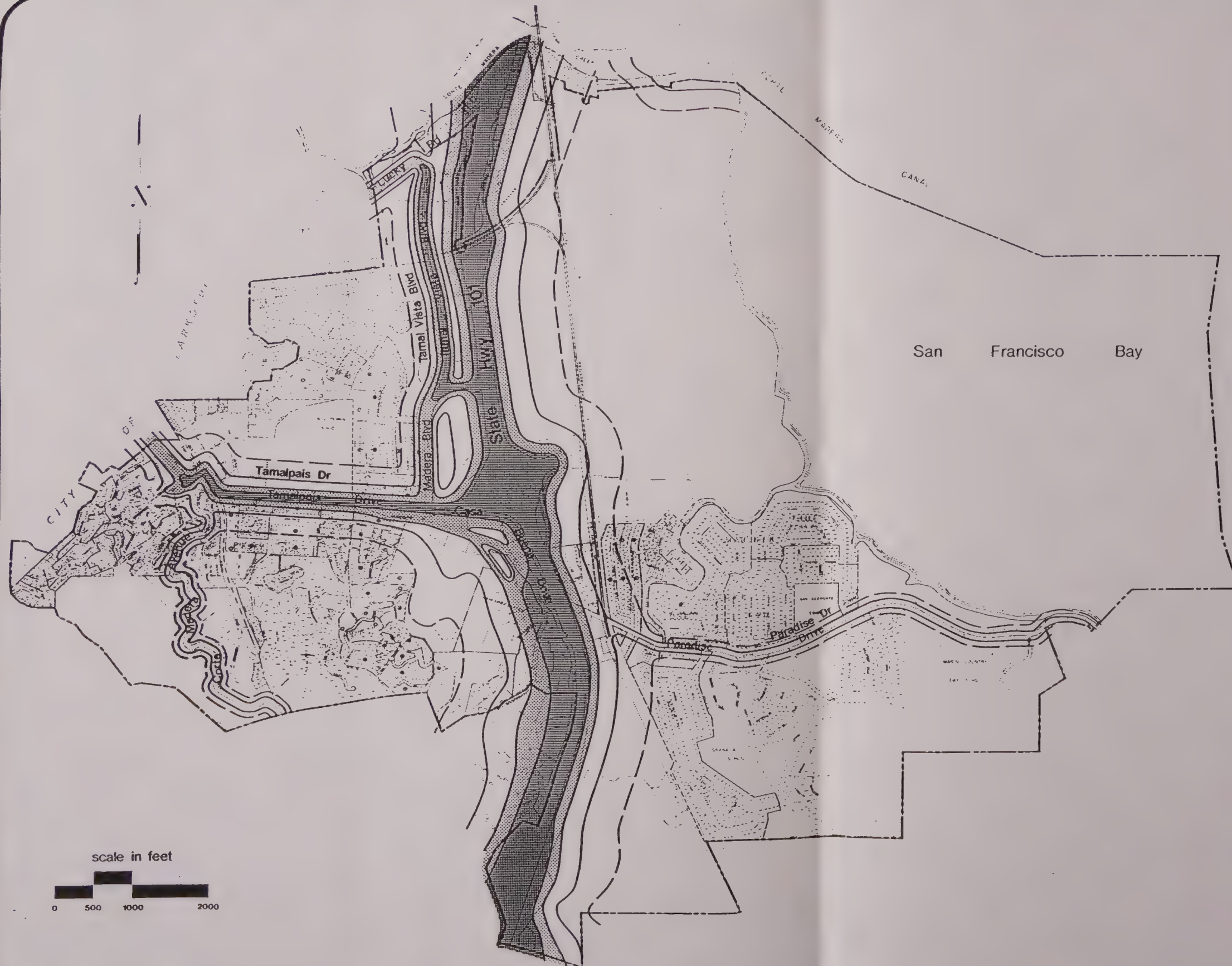
Figure N-2 shows Corte Madera's neighborhoods, while Table N-3 tabulates the number of residents in each neighborhood who are exposed to various levels of noise from transportation sources. They show that almost 80 percent of the Town's population enjoys a quiet environment (up to 60 decibels). Another 15 percent reside in areas where the noise is conditionally acceptable (up to 70 decibels); and 5 percent live in normally unacceptable areas, all along Tamal Vista Blvd., Tamalpais Drive, and U.S. 101. The noisiest neighborhoods are Meadowsweet and the Lucky Drive areas.

Community Noise Environments 1977

Day-night
Sound Levels (Ldn)



Note: for 1990 contours subtract
5 decibels from 1977 contours.



May 1977

The Town of
CORTE MADERA
California


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FIGURE N-1

TABLE N-3

ESTIMATED 1977 CORTE MADERA PLANNING AREA POPULATION SUBJECT TO VARIOUS NOISE LEVELS

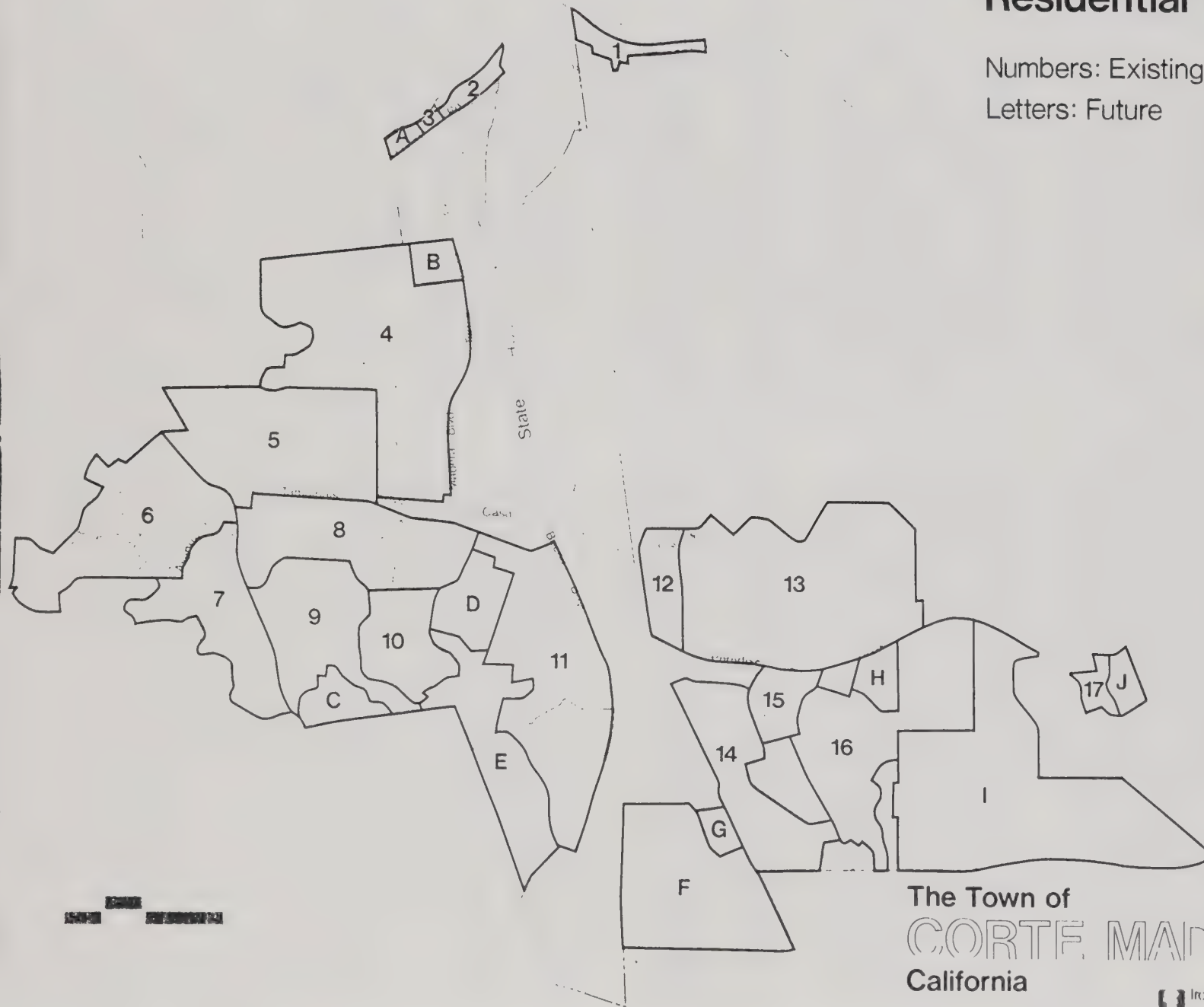
Area	Total*	Population Exposed to Ldn Levels							
		Up to 60	% 60-65	% 65-70	% Over 70				
1. Greenbrae Boardwalk	135	107	79.3	28	20.8	--	--	--	--
2. Lucky Boardwalk	38	--	--	14	35.0	12	32.5	12	32.5
3. Lucky Condominiums	28	12	44.8	10	34.5	6	20.7	--	--
4. Madera Gardens	1,155	977	84.6	49	4.2	84	7.3	45	3.9
5. Town Hall/Willow Area	663	613	92.5	50	7.5	--	--	--	--
6. Christmas Tree Hill	850	696	81.9	84	9.9	70	8.2	--	--
7. Corte Madera Avenue/Montecito	150	75	50.0	75	50.0	--	--	--	--
8. Chapman Park	703	460	65.5	51	7.2	107	15.2	85	12.1
9. Alta Terrace/Chapman Hill	318	318	100.0	--	--	--	--	--	--
10. Hidden Valley	150	150	100.0	--	--	--	--	--	--
11. Meadowsweet	1,242	462	37.2	291	23.4	237	19.1	252	20.3
12. Marina Village	189	180	95.0	9	5.0	--	--	--	--
13. Mariner Cove	1,102	1,033	93.7	69	6.3	--	--	--	--
14. Marin Estates	500	470	94.0	30	6.0	--	--	--	--
15. Mariner Green	360	325	90.3	35	9.7	--	--	--	--
16. East Corte Madera Hilldwellers	530	512	96.6	18	3.4	--	--	--	--
17. Uplands	315	252	80.2	63	19.8	--	--	--	--
TOTALS	8,428	6,641	78.8	877	10.4	514	6.1	396	4.7

* Based on dwelling units; assumes no vacancies; does not consider group quarters; 2.5 persons per unit. (Family size from January 1, 1977 population estimates prepared by State Department of Finance.)

Residential Areas

Numbers: Existing

Letters: Future



The Town of
CORTE MADERA
California

May 1977

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Planning Consultants

FIGURE N-2

Future Transportation Noise. Most background noise in Corte Madera is now generated by motor vehicles, and it can be assumed that these autos, trucks, busses and motor-cycles will continue to be the major noise source for the next two decades.

The California Vehicle Code requires precise reductions in motor vehicle noise to be phased in through 1987. Typically, the Code requires the noise from individual vehicles to be reduced by ten decibels. To some extent this will be offset by increases in traffic volumes. Should traffic volume double by 1990, for instance, traffic noise would be five decibels more than it would be with stable volumes. Since even the "worst case" traffic projections show traffic no more than doubling, it seems reasonable to assume that by 1990 traffic noise in Corte Madera will be reduced overall by at least five decibels. Thus, 1990 noise contours can be estimated by subtracting five decibels from each of the contours shown on the 1977 contour map.

As a consequence, as shown in Table N-4, the proportion of the population enjoying a quiet environment (up to 60 dB) will increase from 80 percent to 90 percent. No residential area will be subject to normally unacceptable noise levels (greater than 70 dB), and only ten percent of the population will reside in conditionally acceptable areas. Nonetheless, those areas now experiencing the highest noise levels - those along Tamal Vista Blvd., Tamalpais Drive, and US 101 - will continue to do so. In addition, over 30 percent of the residents of the site on Tamal Vista across the street from the Coop Center, which is not yet developed, will live in areas where the noise is only conditionally acceptable.

Other Noise Sources. The Corte Madera Police Department has at times received complaints about the following miscellaneous noise sources:

1. Loudspeakers at car dealers. Where auto dealers are located next to residential areas, complaints have been received. The Town's Zoning Ordinance now prohibits the use of loudspeakers next to residential areas.
2. Police Sirens.
3. Construction. While attempts have been made to route construction vehicles away from residential areas, when possible, complaints have occasionally been received.
4. Barking dogs. The Municipal Code contains provisions for declaring barking dogs a nuisance when complaints are received from several neighbors.
5. Fire Department horn.

Historically, noise has not been a major source of community complaints in the Town of Corte Madera.

TABLE N-4

ESTIMATED 1990 CORTE MADERA PLANNING AREA POPULATION SUBJECT TO VARIOUS NOISE LEVELS

Area		Population Exposed to Ldn Levels						
<u>Existing Development</u>		<u>Total*</u>	<u>Up to 60</u>	<u>%</u>	<u>60-65</u>	<u>%</u>	<u>65-70</u>	<u>%</u>
1.	Greenbrae Boardwalk	123	123	100.0				
2.	Lucky Boardwalk	34	12	35.4	11	32.3	11	32.3
3.	Lucky Condominiums	25	20	80.0	5	20.0	--	--
4.	Madera Gardens	1,049	931	88.8	77	7.3	41	3.9
5.	Town Hall/Willow Area	601	601	100.0	--	--	--	--
6.	Christmas Tree Hill	772	708	91.7	64	8.3	--	--
7.	Corte Madera Avenue/Montecito	136	136	100.0	--	--	--	--
8.	Chapman Park	638	463	72.6	98	15.4	77	12.0
9.	Alta Terrace/Chapman Hill	288	288	100.0	--	--	--	--
10.	Hidden Valley	136	136	100.0	--	--	--	--
11.	Meadowsweet	1,128	683	60.5	216	19.2	229	20.3
12.	Marina Village	173	173	100.0	--	--	--	--
13.	Mariner Cove	1,012	1,012	100.0	--	--	--	--
14.	Marin Estates	454	454	100.0	--	--	--	--
15.	Mariner Green	327	327	100.0	--	--	--	--
16.	East Corte Madera Hilldwellers	481	481	100.0	--	--	--	--
17.	Uplands	286	286	100.0	--	--	--	--
<u>Future Development</u>								
A.	Lucky Condominiums	34	34	100.0	--	--	--	--
B.	Coop Site	199	138	69.3	36	18.1	25	12.6
C.	Tara Lara	34	34	100.0	--	--	--	--
D.	Quarry Site	68	68	100.0	--	--	--	--
	Meadowsweet Ridge	58	58	100.0	--	--	--	--
F.	Madera Del Presidio	567	567	100.0	--	--	--	--
G.	Hidden Ranch	34	34	100.0	--	--	--	--
H.	Catholic Archdiocese Property	68	68	100.0	--	--	--	--
I.	Ring Mountain	143	143	100.0	--	--	--	--
J.	Uplands	58	58	100.0	--	--	--	--
TOTALS		8,926	8,036	90.0	507	5.7	383	4.3

* Based on dwelling units; assumes no vacancies and does not consider group quarters; 2.27 persons per unit (ABAG Series 3 Population Projection Family Size 1990).

SPECIFIC NOISE POLICIES

State Government Code Section 65302(g) provides that a Noise Element must recommend mitigating measures and possible solutions to existing and foreseeable noise problems and must specify how the Element will be integrated into the Town's Zoning Ordinance, Noise Ordinance, and Land Use and Circulation Elements. The policies listed here and the implementing approaches listed in the next section do specify mitigating measures, possible solutions, and the Element's integration with other Town planning tools.

Residential, Commercial, and Other New Development

1. Compatibility with Existing Noise Levels. When new development is proposed in a specific location, Table N-1 should be used to determine its acceptability (normally acceptable, conditionally acceptable, etc.). Since future decreases in noise levels are not certain to occur, 1977 noise levels should be used as the basis for determining compatibility.

The following policies shall be pursued within each category:

- a. Normally Acceptable. The land use is satisfactory, assuming buildings are of conventional construction.
- b. Conditionally Acceptable. A detailed analysis by a qualified acoustical engineer shall be required to ensure that interior noise levels do not exceed those shown in Table N-5, and that, in residential developments, some private open space is provided where noise levels do not exceed 60 Ldn.
- c. Normally Unacceptable. Normally unacceptable land uses should not be permitted unless it can be clearly demonstrated to the satisfaction of the Town that the property cannot be developed with a normally or conditionally acceptable use within the foreseeable future, or unless the Town finds that, because of the established uses in the area, development of alternative land uses would have a substantial impact on the existing land uses. In such cases, an acoustical analysis like that specified for conditionally acceptable uses shall be required.
- d. Clearly Unacceptable. New construction of such uses shall not be permitted.

Appendix N-6 discusses noise reduction techniques which may be used to mitigate excessive noise levels. For new construction, these include acoustical site planning, architectural design, construction, and noise barriers.

2. Impacts Created by New Development. New residential or commercial development may increase noise levels by generating additional automobile traffic, by requiring new roads or road widenings, or by use of mechanical equipment such as air conditioners.

In order to limit the impact of new roads, road widenings, and new development on the noise environment of the Town, the following policies should be followed:

- a. A road widening, a new road, or a new development may be considered to have caused a noise impact when either of the following occur:

1. The development causes the noise acceptability of an area to drop. For instance, any development which increases noise levels above 60 Ldn in a residential area, and thus lowers it from normally acceptable to conditionally acceptable, would be considered to have caused a noise impact.
2. The development causes an increase of five dBA or more in the ambient noise level of the area as measured at the property line.

These standards apply to noise caused by both traffic and fixed point sources, such as air conditioners and generators. While traffic generated by a single commercial development would only occasionally cause increases as great as five dBA, noise from an air conditioner in the project might cause such an increase. New roads and road widenings often cause increases greater than five dBA.

- b. If increases in noise due to new roads, road widenings, or new development exceed the above standards, the Town, Caltrans, or other responsible party should provide mitigating measures as needed to maintain the existing noise levels.

Such measures may include the noise barriers or acoustical construction discussed in Appendix N-6. They may also include specific design measures for the road or freeway (a depressed freeway, for instance); operational measures (eliminating trucks); or the selection of an alternative land use generating less traffic. If more than one route is available for a road or other transit route, and one alternative has fewer impacts than others, then that route with the fewest impacts should be chosen wherever feasible.

- c. Determine routes for construction vehicles to major sites, and limit hours of construction.

When construction vehicles must pass through or near a residential area, routes should be established which result in annoyance to the fewest number of people. The Town now limits the hours allowed for public works construction to 8:00 AM to 5:00 PM, but no ordinance regulates private construction.

Existing Impacted Areas

1. Encourage the use of noise barriers and acoustical construction techniques to separate existing residences from noise sources, so long as no substantial visual impacts will occur.

A noise barrier is the easiest and most effective method available to shield an existing house from excessive transportation noise, when the house is at or below street level. However, in cases where a house is above the street, as is the case in the Meadowsweet area, a noise barrier may not be able to shield the house from the street, and acoustical construction techniques (such as sealed, noise-rated windows and air conditioning) may be the only means available.

Appendix N-6 discusses noise barriers and acoustical construction techniques.

2. Support the efforts of the State of California to continue reducing allowable noise emissions from motor vehicles.

It is the State of California's responsibility to set vehicle noise emission standards. As noted, the State plans to systematically reduce noise levels over the next ten years. By 1990, the State hopes to attain a maximum noise level of 70 dB(A) outside all residential developments.

Individual noise sources in motor vehicles are fairly well defined, and the automobile manufacturing industry has developed concepts for noise reduction. Reducing vehicle noise at the source would be the largest single step that could be taken to reduce exterior noise levels in the Corte Madera Planning Area. As noted, if these noise standards continue to be reduced, noise levels by 1990 will be less than they are today - even if traffic is doubled. Thus, it is important that the Town continue to support the State's efforts to reduce allowable noise emissions.

3. Encourage the California Highway Patrol to intensify its enforcement of noise emission standards, particularly for motorcycles and trucks.

Trucks and motorcycles are the most common noise offenders, often due to illegal exhaust modifications. The CHP currently has major responsibility for enforcing noise standards and should be encouraged by the Town to increase its enforcement efforts.

TABLE N-5

ALLOWABLE INTERIOR NOISE LEVELS¹

<u>Use</u>	<u>Interior Equivalent Energy Level (Leq)</u>
All residential and sleeping areas	45 dB
School classrooms	50 dB
School auditoriums; legitimate theater	35 dB
Libraries, recreation buildings	55 dB
Church sanctuaries; movie theaters	40 dB
Concert halls	25 dB
Industrial	55 dB ²
Commercial	50 dB ²
Office	50 dB

1 Standards derived from various sources including EPA and HUD (FHA).

2 In areas where people work continuously on tasks not related to noisier interior activities. Noisier areas should not exceed 75 dB.

RECOMMENDED IMPLEMENTING APPROACHES

Relationship to Other General Plan Elements

The Town's Land Use and Housing Elements should attempt to designate vacant sites for noise compatible land uses, those which are at least conditionally acceptable. Most vacant lots in the Corte Madera Planning Area are in fact designated for uses which are normally or conditionally acceptable. The two major exceptions are the site on Tamal Vista across from the Coop Center and vacant sites in the Meadowsweet area. Because of these sites' proximity to existing residences, commercial uses would not be appropriate. Thus, detailed acoustical studies will be required to ensure that acoustical site planning, design, and construction are used to produce suitable noise levels within any new developments.

In addition, the Circulation Element should take into account the relationship between noise and traffic volumes. For example, a street with an average daily traffic volume of 36,000 vehicles will project an Ldn contour of 65 dB approximately 160 feet from the center of the outer lane; 20,000 vehicles will project 65 dB nearly 115 feet. Thus, plans in the Element for modifying any existing roads should incorporate such mitigation measures as wide rights-of-way for busy streets or barriers.

Zoning Ordinance

a. Mandatory Planned Unit Provisions.

To allow clustering of buildings away from noise sources, the Zoning Ordinance should require submission of a preliminary development plan for any site where noise levels are higher than is normally acceptable. In addition, a noise analysis specifying ways to mitigate excessive noise should be required for any such sites.

b. Variances for Noise Barriers. The possibility of allowing six-foot walls without variances in the street side yards of residences where noise levels exceed 60 Ldn should be explored.

c. Residential Development Review. Since noise levels are expected to decrease in the future, any implementation of these controlled growth provisions should give preference for early development to sites where noise levels are at least conditionally acceptable.

Subdivision Ordinance

The Subdivision Ordinance may be used in two ways to implement the Noise Element. First, the configuration of lots in a subdivision should be designed to minimize exposure of residences to noise sources. For instance, deep lots to permit large setbacks may be required next to a busy street, or subdivisions could cluster buildings away from noise sources.

Second, the Subdivision Map Act requires that subdivisions be disapproved if the site is "not physically suitable for the type of development." That could require that subdivisions be disapproved if located in areas rated normally or clearly unacceptable for the kind of use, and if measures are not taken to reduce the interior or exterior noise to acceptable levels.

Building Code

The State Noise Insulation Standards contained in the Building Code require that an acoustical analysis be completed for any multifamily project where the noise levels exceed 60 Ldn. The 60 Ldn contour shown on the large-scale maps developed for this Noise Element will serve as the basis for determining which projects require an acoustical analysis.

In addition, the policies of this Element recommend that an acoustical analysis be required for any land use, including single-family homes and commercial developments, which is rated conditionally acceptable or less in any area.

Noise Ordinance

Because noise has, historically, not been a major source of community complaints in Corte Madera, there does not seem to be a need to adopt a separate noise ordinance. However, people may become less or more tolerant of noise in the future, or conditions may change, and these changes may be reflected in periodic reviews of this Element.

Other Provisions of the Municipal Code

An amendment to the Municipal Code should be initiated limiting the hours of construction.

Environmental Impact Review

Environmental review of new projects should include the following:

1. The compatibility of the project with the noise levels on the site.
2. The noise impact of the project on nearby development, including noise caused by:
 - a. Traffic, including delivery trucks.
 - b. Stationery mechanical equipment.
 - c. Construction.

The standards established by this Noise Element should be used to determine whether or not an impact occurs.

3. Mitigation measures to avoid any potential impacts.

The environmental review should be conducted at the same time as any required acoustical analysis, and the findings should be used, if appropriate, in modifying any preliminary plan or subdivision to mitigate the noise impacts.

Public Information and Education

The State Office of Noise Control or other appropriate agency should prepare a reference publication listing noise-reducing materials, construction techniques, and other methods to reduce noise levels in both new and existing developments. Such a guide would enable both residents and developers to calculate easily the kind of construction necessary to reduce noise to acceptable levels.

Provisions for Revisions

People may become less or more tolerant of noise in the future, and these changes in attitudes may be reflected periodically in revisions to the noise standards contained in this Element.

In addition, the noise levels shown in this Element will undoubtedly change as traffic conditions and noise emission standards vary. Thus, it is recommended that the contours shown here be re-evaluated at least every five years, and that new maps be produced showing existing conditions.

TECHNICAL APPENDIX

TOWN OF CORTE MADERA GENERAL PLAN

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*Amended January 3, 1978.

TABLE I-1: POPULATION FOR CORTE MADERA AND MARIN COUNTY (1970)

Age	CORTE MADERA				MARIN COUNTY			
	West of Freeway		East of Freeway		Total		Persons	Percent
	Persons	Percent	Persons	Percent	Persons	Percent		
Below 5	527		195		722	8.0	15,497	7.5
5 - 14	1,173		576		1,749	19.3	39,632	19.2
15 - 24	899		301		1,200	13.2	31,864	15.5
12 - 34	934		370		1,304	14.3	31,792	15.4
35 - 44	973		405		1,378	15.2	28,757	14.0
45 - 54	936		334		1,270	14.0	25,326	12.8
55 - 64	643		180		823	9.0	16,986	8.2
65 and above	516		120		636	7.0	15,184	7.4
TOTAL	6,601	72.7	2,481	27.3	9,082		206,038	

TABLE 1-2: INCOME CHARACTERISTICS OF FAMILY HOUSEHOLDS FOR CORTE MADERA, MARIN COUNTY AND SAN FRANCISCO-OAKLAND SMSA (1969)

Income Range	CORTE MADERA			MARIN COUNTY	SAN FRANCISCO-OAKLAND SMSA*
	West Number of Households	East	Total Percent	Percent	Percent
below \$4,000	105	36	5.6	6.9	10.3
\$ 4,000 - \$ 6,999	165	23	8.5	9.0	11.6
\$ 7,000 - \$ 9,999	224	64	11.5	12.9	16.5
\$10,000 - \$14,999	516	183	27.9	27.1	29.4
\$15,000 - \$24,999	676	251	36.9	30.4	24.5
\$25,000 - \$49,999	138	84	8.8	11.7	6.5
above \$50,000	10	11	0.8	2.0	1.2
Median Income	\$14,031	\$15,797	\$14,100	\$13,935	\$11,802

* Includes Marin, Alameda, San Francisco, San Mateo and Contra Costa Counties

TABLE I-3: INCOME CHARACTERISTIC OF FAMILY HOUSEHOLDS BY COUNTY
IN THE SAN FRANCISCO-OAKLAND SMSA (1969)

COUNTY	MEDIAN INCOME
Marin	\$13,935
Alameda	\$11,133
Contra Costa	\$12,423
San Francisco	\$10,503
San Mateo	\$13,222
 TOTAL SMSA	 \$11,802
 CORTE MADERA	 \$14,100

TABLE I-4: OCCUPATIONS OF CORTE MADERA CIVILIAN LABOR FORCE (1970)

INDUSTRY	PERSONS	PERCENT
Construction	211	5.2
Manufacturing	378	9.4
Transportation and Communication	348	8.6
Wholesale and Retail	886	22.0
Finance, Insurance and Real Estate	425	10.5
Business and Repair Service	228	5.7
Personal Services	127	3.1
Health and Education Services	516	12.8
Other Professional and Related Services	322	8.0
Public Administration	270	6.7
Other Industries	88	2.2
Unemployed	232	5.8
TOTAL CIVILIAN LABOR FORCE	4,031	100.0

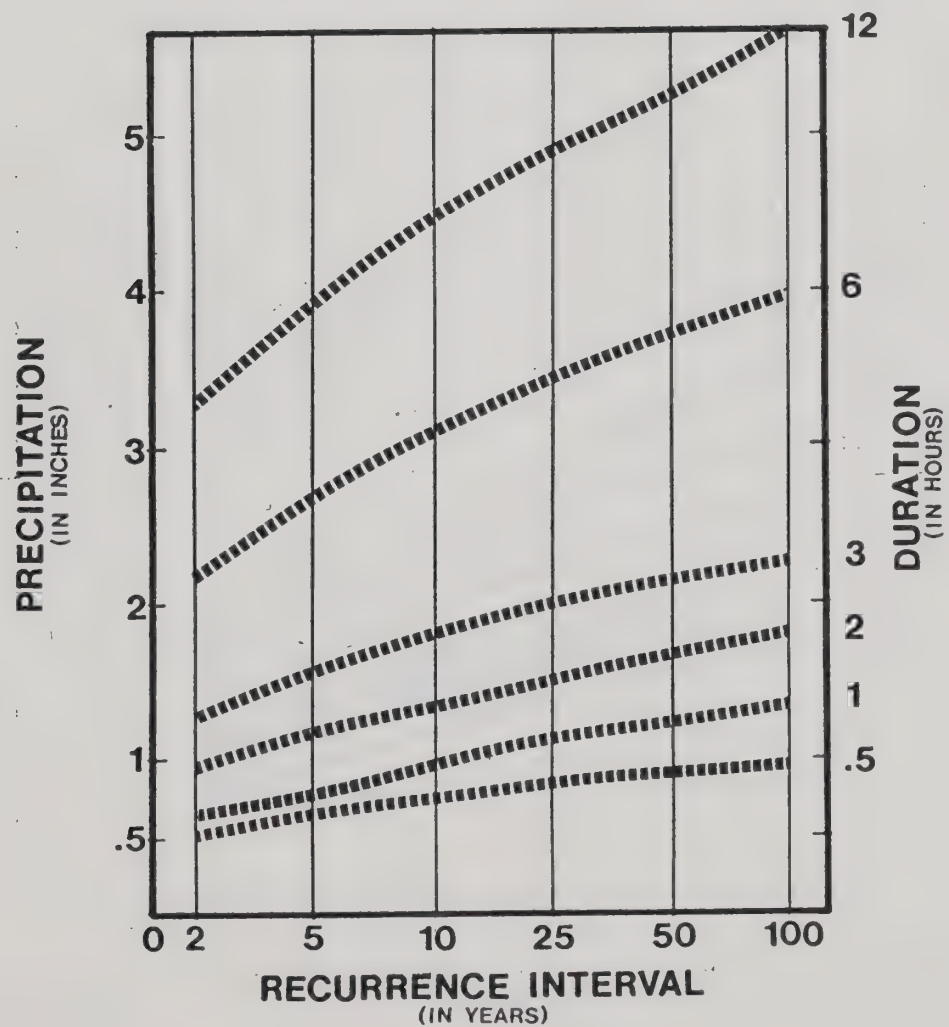
TABLE H3: HOUSING CHARACTERISTICS FOR CORTE MADERA, MARIN COUNTY AND SAN FRANCISCO-OAKLAND SMSA (1970)

HOUSING CHARACTERISTICS	WEST OF FREEWAY	EAST OF FREEWAY	TOTAL CORTE MADERA Number	Percent	MARIN COUNTY Number	Percent	SAN FRANCISCO-OAKLAND SMSA* Number	Percent
Type								
Single-family detached	1,785	651	2,436	75.5	52,340	73.5	667,109	59.1
Two units	67	0	67	2.1	4,068	5.7	81,666	7.2
Three or more units	571	150	720	22.4	14,298	20.0	380,492	33.6
Vacant, seasonal	0	0	0	0	540	0.8	972	0.1
TOTAL HOUSING UNITS	2,423	801	3,224	100.0	71,241	100.0	1,130,239	100.0
Ownership								
Owner-occupied units	1,503	551	2,054	63.7	41,154	57.8	560,749	49.6
Renter-occupied units	836	217	1,053	32.7	26,452	37.1	525,103	46.5
Vacant, year round	84	33	117	3.6	3,095	4.3	43,415	3.8
Vacant, seasonal	0	0	0	0	540	0.8	972	0.1
Year Built (excluding vacant, seasonal)								
Pre - 1950	716	104	820	25.4	23,958	33.9	596,211	52.7
1950 - 1964	1,573	382	1,955	60.7	36,325	51.4	410,185	36.3
1965 - 1970	134	315	449	13.9	10,419	14.7	123,843	11.0
Value of Owner-Occupied Units								
Less than \$15,000	17	10	27	1.3	851	2.1	57,780	5.4
\$15,000 - \$24,999	253	27	280	13.6	7,715	18.7	216,780	38.6
\$25,000 - \$34,999	832	213	1,045	50.9	13,559	32.9	178,106	31.8
\$35,000 - \$49,999	388	225	613	29.8	11,517	28.0	89,526	16.0
\$50,000 or more	81	8	89	4.4	7,512	18.3	45,916	8.2
Median value	\$31,200	\$34,600	\$33,000		\$33,900		\$26,000	
Median rent	\$ 161	\$ 271	\$ 178		\$ 161		\$ 130	
Persons per Housing Unit								
1 person	414	70	484	15.5	11,991	17.7	262,249	24.2
2 - 3 persons	1,229	379	1,608	51.8	33,088	48.9	505,023	46.5
4 - 5 persons	586	264	850	27.4	17,784	26.4	239,097	22.0
5 or more persons	110	55	165	5.3	4,743	7.0	79,483	7.3
Average number of persons/unit	2.82	3.23	2.92		3.05		2.86	
Persons/Room/Housing Unit								
1.00 persons or less	2,269	743	3,012	97.0	65,177	96.4	1,019,641	94.0
1.01 - 1.50 persons	61	24	85	2.7	1,886	2.8	47,102	4.3
1.51 persons or more	9	1	10	0.3	543	0.8	19,109	1.7

* Includes Marin, Alameda, San Francisco, San Mateo and Contra Costa Counties.

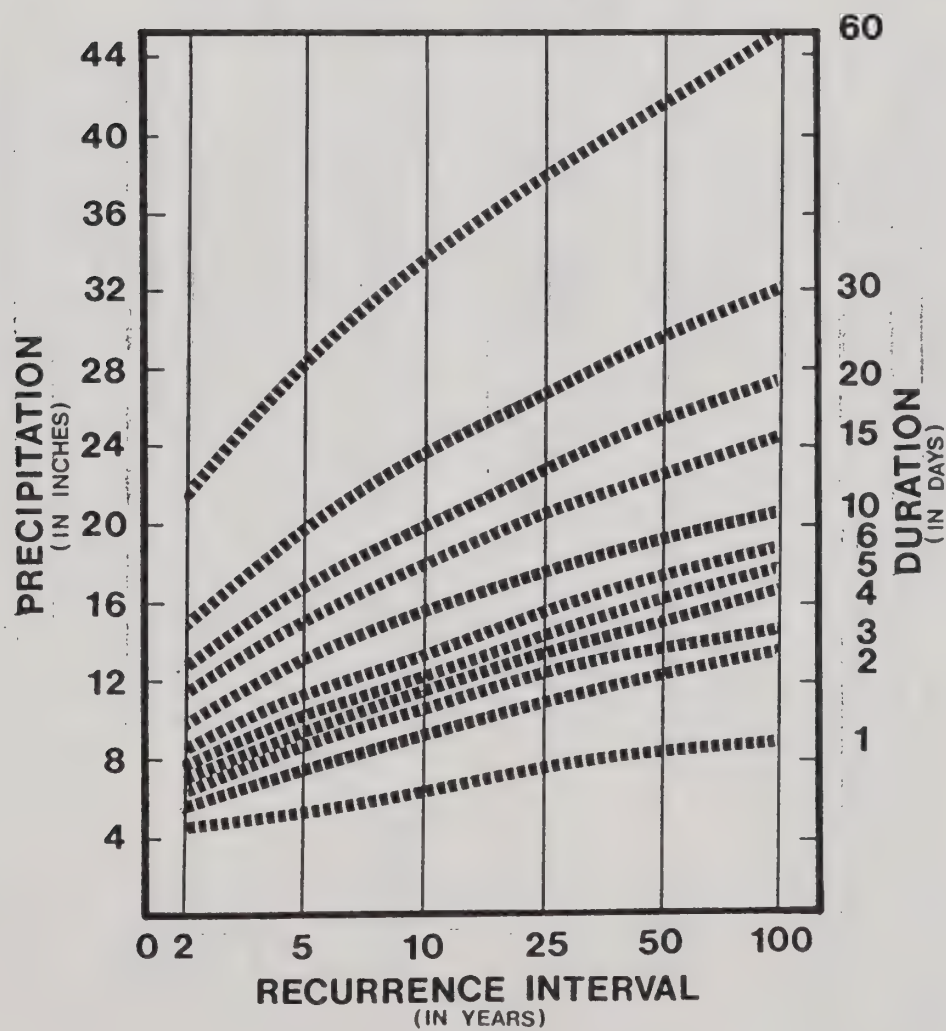
*Amended January 3, 1978.

FIGURE S3: DEPTH-FREQUENCY CURVES OF STORM PRECIPITATION FOR DURATIONS OF 30 MINUTES TO 12 HOURS FOR CORTE MADERA (MEAN ANNUAL PRECIPITATION OF 38 INCHES)



*Amended January 3, 1978.

FIGURE S4: DEPTH FREQUENCY CURVES OF STORM PRECIPITATION FOR DURATIONS 1 TO 60 DAYS FOR CORTE MADERA (MEAN ANNUAL PRECIPITATION OF 38 INCHES)



*Amended January 3, 1978.

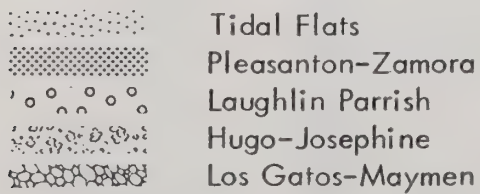
TABLE S1: SOILS CHARACTERISTICS IN THE CORTE MADERA PLANNING AREA

Name	Natural Drainage	Subsoil Permeability	Runoff	Erosion Hazard	AWC ¹ (inches)	Fertility	Foundation Soil Pressure Limitations ²	Shrink-Swell Potential ³
Tidal Flats	very poor	slow	very slow	slight	4 to 6	very slow	severe	shrink: high swell: low
Laughlin-Parrish Association	good to moderately good	moderate to moderately slow	rapid to medium	moderate	2 to 7.5	moderate	slight to moderate	low
Hugo-Josephine Association	good	variable: slow to rapid	medium	moderate to slight	4.5 to 8	moderate to moderately high	slight to moderate	low to moderate
Los Gatos-Maymen Association	good	moderate to moderately slow	rapid	high to moderate	1.5 to 6.5	very low	slight	low

1. Available Water-holding Capacity
2. The ability of soils to withstand pressure imposed on them by foundations. Allowable pressure is for a foundation 1 foot in width at a minimum depth of 1 foot below adjacent virgin ground; the surface foot of soil is not considered in rating the soil. Degree of limitation: slight = more than 2,000 pounds; moderate = 1,000 to 2,000 pounds; severe = less than 1,000 pounds.
3. Shrink-swell behavior is that quality of the soil that determines its volume change with change in moisture content. Volume change is influenced by the kind and amount of clay in the soil.



FIGURE S-5
SOIL TYPES



*Amended January 3, 1978.

*Amended January 3, 1978.

TA-10

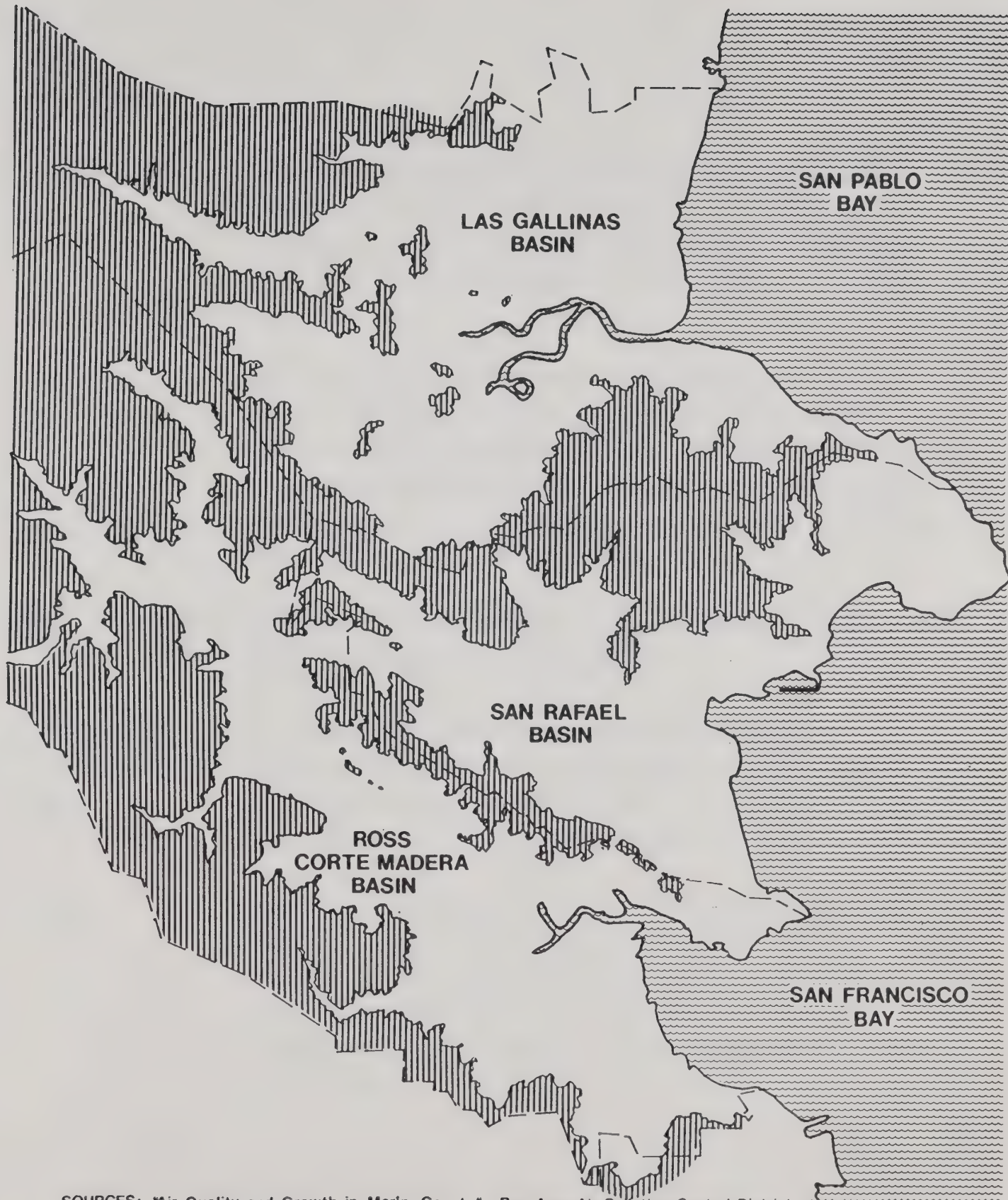
TABLE CEQ 1: CONTAMINANT STATISTICS VS. AIR QUALITY STANDARDS FOR 1970 AND 1971 AT THE BAAPCD AIR MONITORING SITE IN SAN RAFAEL

POLLUTANT	AVERAGING TIME	FEDERAL STANDARDS		STATE STANDARDS	DAYS EXCEEDING STRICTEST STANDARD		MAXIMUM VALUE OBSERVED	
		PRIMARY	SECONDARY		1970	1971	1970	1971
Suspended Particulate	Annual ⁺ 24-hours	75 $\mu\text{g}/\text{m}^3$	60 $\mu\text{g}/\text{m}^3$	60 $\mu\text{g}/\text{m}^3$	0	0	44 $\mu\text{g}/\text{m}^3$	46 $\mu\text{g}/\text{m}^3$
		260 $\mu\text{g}/\text{m}^3$	150 $\mu\text{g}/\text{m}^3$	100 $\mu\text{g}/\text{m}^3$	4	6	136 $\mu\text{g}/\text{m}^3$	125 $\mu\text{g}/\text{m}^3$
Carbon Monoxide	12-hours	-	-	10 ppm	0	0	8.2 ppm	7.8 ppm
	8-hours	9 ppm	9 ppm	-	2	0	9.3 ppm	8.8 ppm
	1-hour	35 ppm	35 ppm	40 ppm	0	0	19 ppm	18 ppm
Oxidant	1-hour	0.08 ppm	0.08 ppm	0.10 ppm	41	21	0.24 ppm	0.18 ppm
Nitrogen Dioxide	Annual	0.05 ppm	0.05 ppm	-	0	*	0.03 ppm	*
	1-hour	-	-	0.25 ppm	0	0	0.17 ppm	0.12 ppm
Non-methane Hydrocarbon	3-hours (6-9 a.m.)	0.24 ppm	0.24 ppm	-	*	*	*	*

Source: "Air Quality & Growth in Marin County", Bay Area Air Pollution Control District, June 1972

- (-) = No standard exists
- (*) = Statistics are not available
- (+) = Geometric mean

$\mu\text{g}/\text{m}^3$ (micrograms/cubic meter) and ppm (part per million) are measures of weight/volume and volume/volume respectively



SOURCES: "Air Quality and Growth in Marin County", Bay Area Air Pollution Control District, June 1972

FIGURE CEQ-3 AIR BASINS

||||| 200 Foot Elevation

1 1/2 0 1 Mile



*Amended January 3, 1978.

DEFINITIONS

<u>Decibel, dB:</u>	A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure which is 20 micropascals (20 micronewtons per square meter).
<u>A-Weighted Sound Level:</u>	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.
<u>L10:</u>	The A-weighted sound level exceeded 10 percent of the sample time. Similarly, L50, L90, L99, etc.
<u>Equivalent Energy Level, Leq:</u>	The sound level corresponding to a steady state sound level containing the same total energy as a time varying signal over a given sample period. Leq is typically computed over 1, 8, and 24 hour sample periods.
<u>CNEL:</u>	Community Noise Equivalent Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7 p.m. to 10 p.m. and after addition of 10 decibels to sound levels in the night before 7 a.m. and after 10 p.m.

*Amended January 3, 1978.

Ldn:

Day-Night Average Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of 10 decibels to sound levels in the night before 7 a.m. and after 10 p.m.

Note: CNEL and Ldn represent daily levels of noise exposure averaged on an annual basis, while Leq represents the equivalent energy noise exposure for a shorter time period, typically one hour.

Noise
Exposure
Contours:

Lines drawn about a noise source indicating constant energy levels of noise exposure. CNEL and Ldn are the metrics utilized herein to describe community exposure to noise.

Ambient
Noise Level:

The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Intrusive
Noise:

That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency and time of occurrence, and tonal or informational content as well as the prevailing ambient noise level.

Equal
Noisiness
Zones:

Defined areas or regions of a community wherein ambient noise levels are generally similar (within a range of 5 dB). Typically, all sites within any given noise zone will be of comparable proximity to major noise sources.

NOISE ELEMENT REQUIREMENTS

Government Code Section 65302(g), as amended by Senate Bill 860 (Beilenson, 1975), describes the requirement for a noise element as follows:

A noise element which shall recognize guidelines adopted by the Office of Noise Control pursuant to Section 39850.1 of the Health and Safety Code, and which quantifies the community noise environment in terms of noise exposure contours for both near and long-term levels of growth and traffic activity. Such noise exposure information shall become a guideline for use in development of the land use element to achieve noise compatible land use and also to provide baseline levels and noise source identification for local noise ordinance enforcement.

The sources of environmental noise considered in this analysis shall include, but are not limited to, the following:

1. Highways and freeways.
2. Primary arterials and major local streets.
3. Passenger and freight on-line railroad operations and ground rapid transit systems.
4. Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
5. Local industrial plants, including, but not limited to, railroad classification yards.
6. Other ground stationary noise sources identified by local agencies as contributing to the community noise environment.

The noise exposure information shall be presented in terms of noise contours expressed in community noise equivalent level (CNEL) or day-night average level (Ldn). CNEL means the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7 p.m. to 10 p.m. and after addition of 10 decibels to sound levels in the night before 7 a.m. and after 10 p.m. Ldn means the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night before 7 a.m. and after 10 p.m.

*Amended January 3, 1978.

The contours shall be shown in minimum increments of 5 dB and shall continue down to 60 dB. For areas deemed noise sensitive, including, but not limited to, areas containing schools, hospitals, rest homes, long-term medical or mental care facilities, or any other land use areas deemed noise sensitive by the local jurisdiction, the noise exposure shall be determined by monitoring.

A part of the noise element shall also include the preparation of a community noise exposure inventory, current and projected, which identifies the number of persons exposed to various levels of noise throughout the community.

The noise element shall also recommend mitigating measures and possible solutions to existing and foreseeable noise problems.

The state, local or private agency responsible for the construction, maintenance, or operation of those transportation, industrial, or other commercial facilities specified in paragraph two of this subdivision shall provide to the local agency producing the general plan, specific data relating to current and projected levels of activity and a detailed methodology for the development of noise contours given this supplied data, or they shall provide noise contours as specified in the foregoing statements.

It shall be the responsibility of the local agency preparing the general plan to specify the manner in which the noise element will be integrated into the city or county's zoning plan and tied to the land use and circulation elements and to the local noise ordinance. The noise element, once adopted, shall also become the guidelines for determining compliance with the State's Noise Insulation Standards, as contained in Section 1092 of Title 25 of the California Administrative Code.

*Amended January 3, 1978.

ACOUSTICAL SCALE

dba	HUMAN RESPONSE	OUTDOOR	INDOOR
160	Lethal		
155			
150			
145	Painfully Loud		
140		sonic boom	
135			
130			
125	Physical Discomfort	jet take-off at 200'	
120			oxygen torch
115			discotheque
110		motorcycle at 20'	
105			
100	Annoying	power mower	
95		diesel pump at 100'	
90		freight train at 50'	food blender
85		overhead plane at 1000'	
80		freeway traffic at 50'	alarm clock
75	Intrusive		
70		average traffic at 100'	vacuum cleaner
65			electric typewriter
60			
55			
50			normal conversation
45		light traffic at 100'	refrigerator
40			
35			whispering
30			
25	Quiet		
20			
15			
10	Threshold of Hearing	leaves rustling	
5			
0			
dba			

*Amended January 3, 1978.

RANGE OF TYPICAL OUTDOOR NOISE ENVIRONMENTS
EXPRESSED IN TERMS OF DAY NIGHT SOUND LEVEL (L_{dn}), dB*

	L _{dn}	
	DAY-NIGHT SOUND LEVEL DECIBELS	OUTDOOR LOCATIONS
QUALITATIVE DESCRIPTIONS	-90-	Los Angeles - 3rd Floor Apartment Next to Freeway
	-	
	-	Los Angeles - 3/4 mile from Touch Down at Major Airport
	-	
	-	
City Noise (Downtown Major Metropolis)	-80-	
	-	Los Angeles - Downtown with Some Construction Activity
	-	
	-	
	-	
Very Noisy	-70-	Harlem - 2nd Floor Apartment
	-	
	-	
	-	
	-	
Noisy Urban	-60-	Boston - Row Housing on Major Avenue
	-	
	-	
	-	
	-	
Urban	-50-	Watts - 8 miles from Touch Down at Major Airport
	-	Newport - 3.5 miles from Takeoff at Small Airport
	-	
	-	Los Angeles - Old Residential Area
	-	
Suburban	-40-	
	-	
	-	
	-	
	-	
Small Town & Quiet Suburban	-30-	Fillmore - Small Town Cul-de-Sac
	-	San Diego - Wooded Residential
	-	
	-	
	-	California - Tomato Field on Farm
	-20-	

* From : Technical Supplement to Noise Element Guidelines; California Office of Noise Control, February, 1976.

*Amended January 3, 1978.

APPENDIX N- 5

NOISE MEASUREMENTS IN CORTE MADERA

The firm of Edward Pack & Associates undertook noise monitoring in May, 1977 at selected locations in Corte Madera.

The following list shows the locations and the sound levels recorded. The distance from the street centerline is also shown. This is an important factor since the sound level decreases 5 dB with each doubling of distance. For example, 65 dB was recorded 25 feet from the centerline of Paradise Drive at San Clemente School. The sound level would be decreased to 60 dB at 50 feet and 55 dB at 100 feet.

Day-Night Sound Levels (Ldn) Measured At 16 Survey Locations in Corte Madera

<u>Location</u>	<u>Ldn in dB</u>
1. Marin Country Day School, 25 feet from the centerline of Paradise Drive	64
2. San Clemente School, 25 feet from the centerline of Paradise Drive	65
3. Meadowsweet School, 35 feet from the centerline of Meadowsweet Drive, south of Conow Street intersection	62
4. Neil Cummins School, 50 feet from the end of Eastman Avenue	61
5. Ferry	58
6. Larkspur-Corte Madera School, 50 feet from the centerline of Corte Madera Avenue	67
7. Highway 101 at El Camino Drive, 75 feet east of the nearest lane of the highway	70*
8. Meadowsweet Drive, just south of Lupine Drive, 240 feet from the nearest lane of Highway 101	70*
9. Tamalpais Drive, 75 feet from the centerline and 200 feet west of the edge of pavement of Sausalito St.	67
10. Madera Boulevard, 75 feet from centerline and south of Monona Drive	65
11. Corte Madera Avenue, 20 feet from centerline and north of Pavilion Path	66

* 24 hour measurement, all others are based on two or three hour sample.

*Amended January 3, 1978.

<u>Location</u>	<u>Ldn in dB</u>
12. Corte Madera Library area, 600 feet from edge-of-pavement of Meadowsweet Drive	59
13. Corte Madera Library, 50 feet from centerline of Meadowsweet Drive	64
14. Redwood Avenue, 50 feet from centerline and west of Corte Madera Avenue	65
15. Tamal Vista Boulevard, 50 feet from centerline and south of Chickasaw Court	68
16. Fifer Avenue, 50 feet from the centerline and east of Lucky Road.	66

*Amended January 3, 1978.

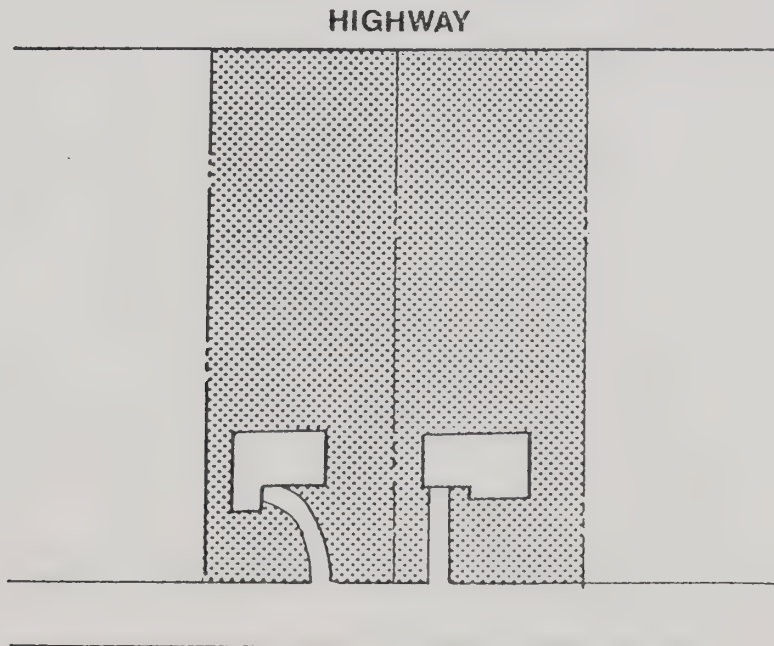
NOISE REDUCTION TECHNIQUES

A variety of physical techniques are available for reducing transportation noise. Two of these techniques, acoustical site planning and architectural design, are suitable only for new developments. However, the other two, acoustical construction and noise barriers, can be used for both existing and new projects.

Acoustical Site Planning

Acoustical site planning arranges buildings on a parcel of land to minimize noise impacts. Opportunities for successful acoustical site planning are determined by the size of the lot, the terrain, and the zoning. In general, conventional zoning patterns lack the flexibility necessary to permit innovative site planning techniques. However, planned developments, which have been used extensively in Corte Madera provide needed flexibility. Acoustical site planning techniques include:

1. Placing as much distance as possible between the noise source and the noise-sensitive activity



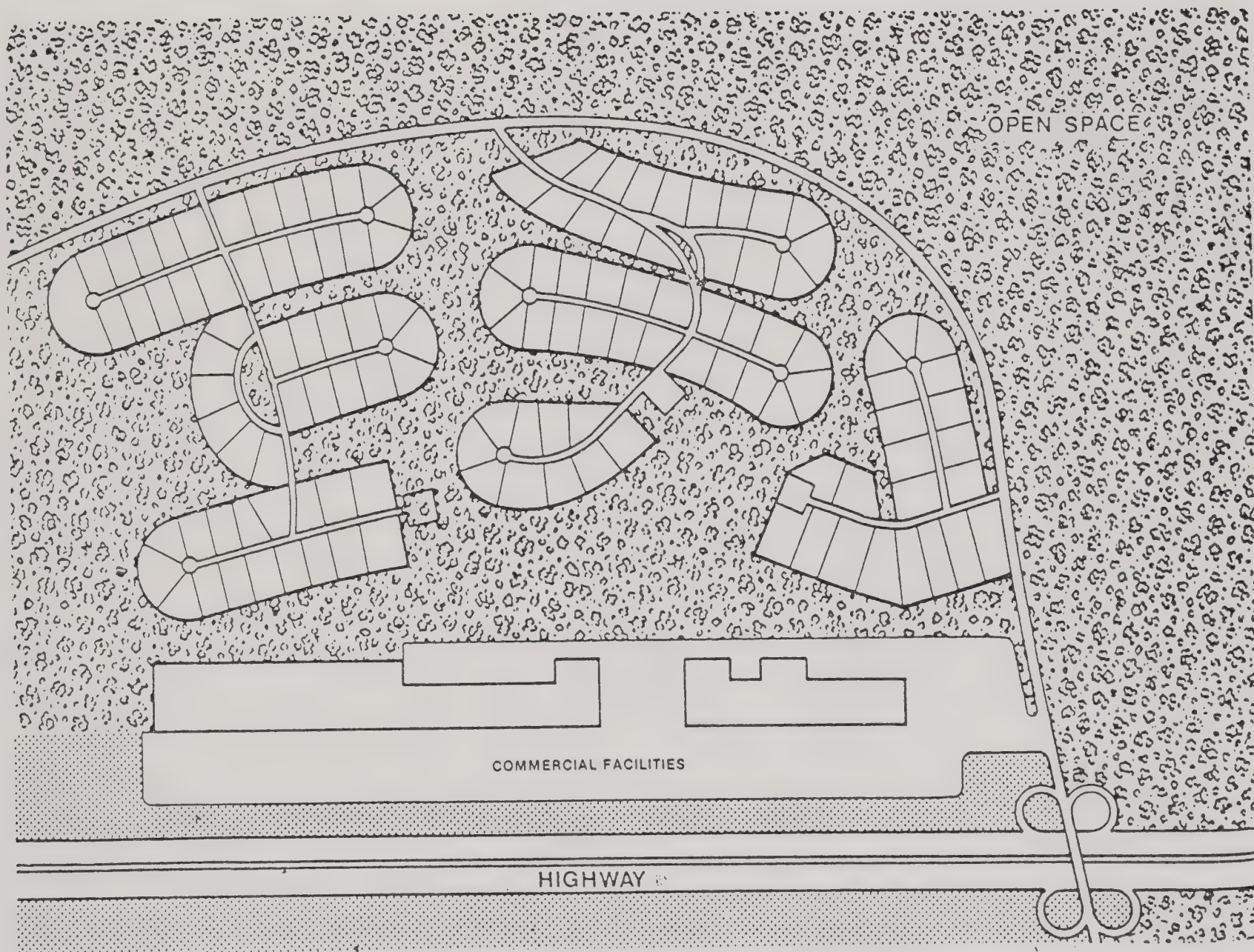
Houses placed near the front of long, narrow lots have deep rear yards available to act as noise buffers.

2. Placing noise-compatible activities such as parking lots, open space, and commercial facilities between the noise source and the sensitive activity
3. Using buildings as barriers.
4. Orienting noise-sensitive buildings to face away from the noise source.
5. Allowing no houses to front on arterial or collector streets.

*Amended January 3, 1978.

*Amended January 3, 1978.

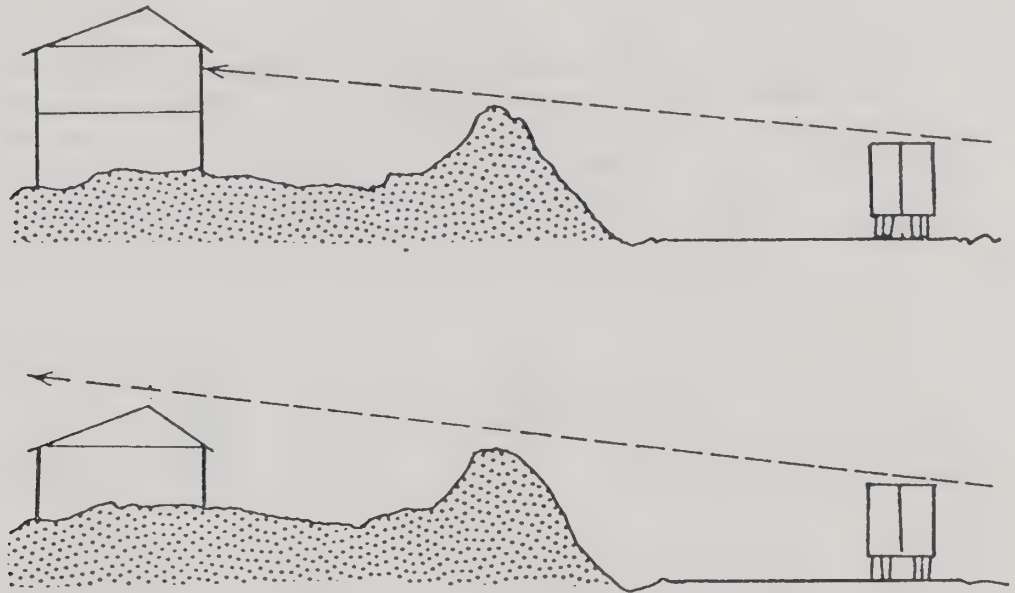
TA-22



Placement of noise compatible
land uses near highway in
Planned Unit Development

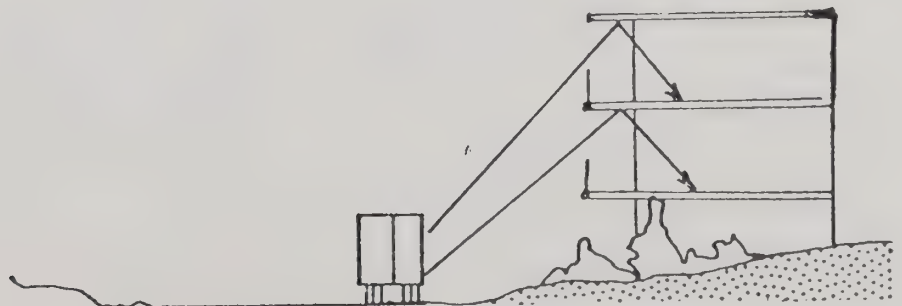
Acoustical Architectural Design

Acoustical architectural design incorporates noise-reducing concepts in the design of individual buildings. The areas of architectural concern include building height, room arrangement, window placement, and balcony and courtyard design. For example, in some cases, noise impacts can be reduced if the building is limited to one story and if bedrooms and living rooms are placed on the part of the building which is farthest from the noise source.



Impact reduced by use of single-story houses.

The standard jutting balcony facing the road may reflect traffic noise directly into the interior of the building



Standard balcony facing road can reflect traffic noise into the interior of the building.

Both of these techniques have the potential to be quite effective (especially acoustical site planning), can be resolved before permits are issued and construction begins, and cost very little.

Acoustical Construction

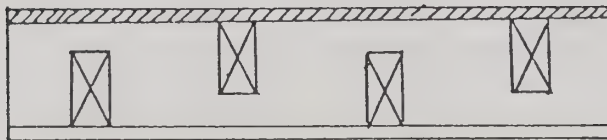
Acoustical building construction is the use of materials and methods of construction to reduce interior noise impacts. It includes walls, windows, doors, ceilings, and floors that have been treated to reduce sound transmission into a building.

Acoustical construction primarily uses dense materials and air spaces within materials to reduce noise levels.

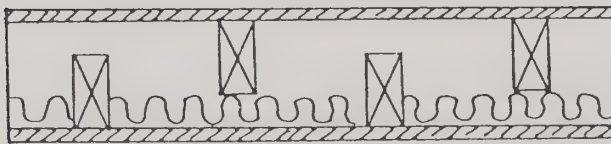
Sound Transmission Class (STC) is used as a measure of a material's ability to reduce sound. The Sound Transmission Class rating is equal to the number of decibels a sound is reduced as it passes through a material and is an official rating endorsed by the American Society of Testing and Measurement. Enough information is available for the Town to compile a list of noise reducing materials and construction techniques and their STC ratings. Such a list could be used for reference and to aid citizens in reducing noise within their homes.



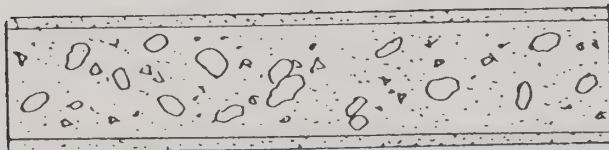
Common Stud Wall
STC = 35



Staggered Stud Wall
STC = 39



Staggered Stud Wall
With Absorbent Blanket
STC = 43



7" Concrete Wall
STC = 52

Wall types with STC rating

*Amended January 3, 1978.

Some specific structural measures which may help to reduce noise are the following:

1. Slab foundations preclude noise leakage into the ground floor from underneath.
2. Sliding doors should not be allowed on the side of the building that faces the principal source of noise. Sliding doors along the "noise shadow" side and at right angles to the noise source are generally acceptable, provided that they are sealed when closed.
3. Windows facing the principal noise source should be equipped with STC-rated glass panes. Windows facing in other directions may be made of ordinary glass, but their frames and openable panels should be sealed when closed, as in all noise-exposed windows.
4. No jalousie-type windows should be allowed.
5. Use of the staggered studs, cavity-fill-type insulation, and thicker-than-one-half-inch sheetrock or stucco shown on the preceding page should be considered primarily for walls and roof-ceiling panels facing the principal noise source and only secondarily for walls siding at right angles to the principal noise source and for walls in the noise shadow.
6. Workmanship of exterior walls, ceilings, doors, and openable windows and glass doors should avoid cracks and other openings. They may require caulking, for example.
7. Fireplace flues should be equipped with a tightly closing damper.
8. No direct openings from the exterior to the interior, such as mail slots or ordinary attic vents, should be allowed on the wall or roof facing the principal noise source.
9. No metal pipes, water pipes or other utility conduits, for example, should pass through an exterior wall or roof facing in the direction of the principal noise source.
10. There should be no back-to-back metal boxes (for example, electrical outlets or fuse boxes) in exterior walls facing the principal noise source.
11. All air ducts, connectors, and elbows should contain an interior lining of fiberglass insulation at least one-half inch thick and at least five feet in length (or other equivalent acoustic treatment) just before any room vent or exhaust vent. Where the total duct length is less than five feet, a fiberglass lining of the entire duct length is sufficient.
12. All ceiling and exhaust ducts in rooms having a wall or roof that faces the principal noise source should be provided with a bend in the duct so that there is no direct line of sight through the duct.

*Amended January 3, 1978.

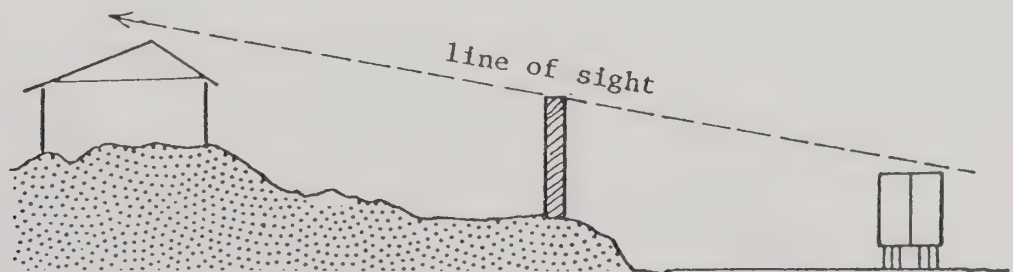
13. Each dwelling exposed to excessive noise levels should be equipped with a manually operated switch to actuate the blower of the central ventilating system, to provide a complete hourly air change at least equal to that required by the Uniform Building Code for rooms other than bathrooms. The maximum noise level created by the central ventilating must not exceed 40 dBA at the center of each room.
14. An allowance should be made for the noise attenuation created by carpeting and furnishings. Wall-to-wall carpeting adds approximately 1 dB of attenuation, and drapes and ordinary bedroom and living quarter furnishings can increase internal noise attenuation from 1 to 3 dB.

Acoustical construction can be an expensive technique, especially when added to an existing building; However, it need not be prohibitively expensive in new construction, and it is one of the most effective ways of reducing interior noise. However, it is not necessarily the most desirable since it alone does nothing to reduce exterior noise levels.

Noise Barriers

A noise barrier is an obstacle placed between a noise source and a receiver. It works by interrupting the path of the noise. Barrier types include berms made of sloping mounds of earth, walls and fences constructed of a variety of materials, thick plantings of trees and shrubs, and combinations of these materials. The choice between these depends on a variety of factors, including the desired level of sound reduction, space, cost, safety, and aesthetics.

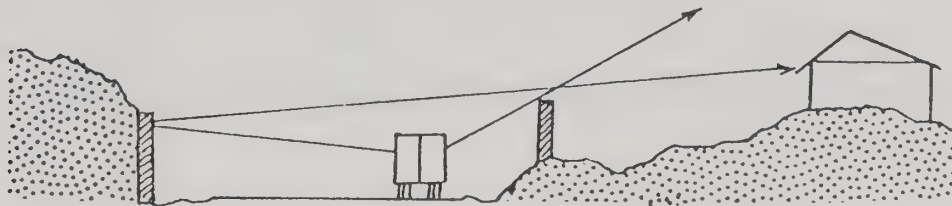
To be effective, a barrier must block the "line of sight" between the highest point of a noise source, such as a truck's exhaust stack, and the highest point of the receiver. To be most effective, a barrier must also have reasonable density and be impervious to air.



To be effective a barrier must block the "line of sight."

Barrier walls and fences can reduce exterior noise as much as 15 dB(A). They require little space or maintenance, but may be aesthetically unappealing and can reflect noise to the other side of the road. The cost of a fence or wall-type barrier can vary considerably. Generally, wood barriers are least expensive, while concrete block barriers cost the most. Precast concrete panels are intermediate in cost.

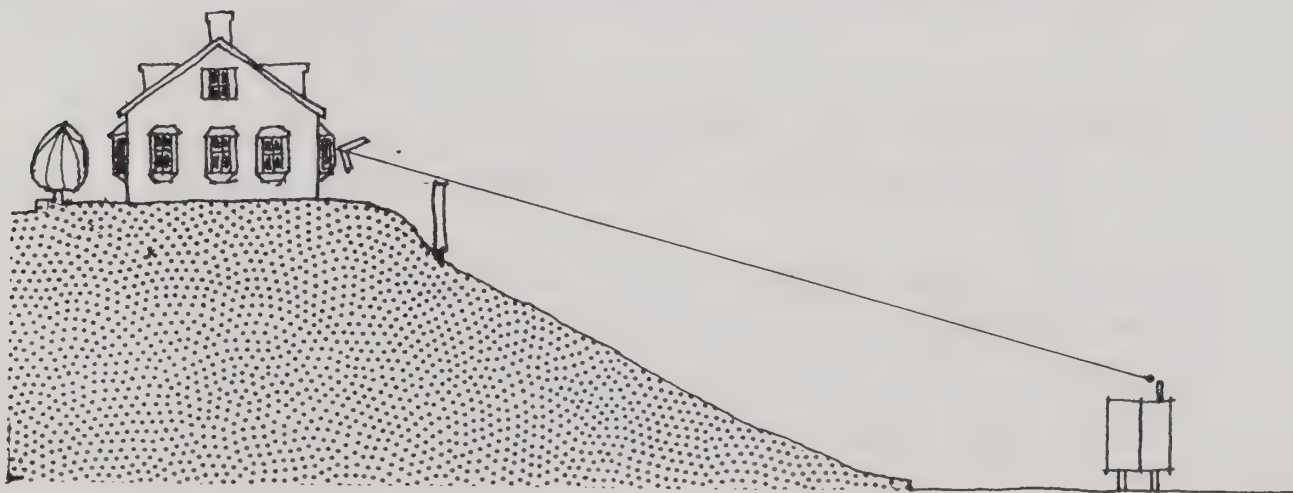
An earth berm, a long mound of earth running parallel to the roadway, is another type of barrier. Berms range from 5 to 50 ft. in height and can provide noise attenuation of up to 15 dB(A). They have some advantages over walls. Instead of reflecting noise from one side of the highway to the other as walls do, berms deflect sound upwards. Berms can also satisfy a portion of normal landscaping requirements.



Wall barriers may reflect sound from one side of a roadway to the other.

The cost of building a berm in 1975 was about \$1.00/cu.yd. when the earth is at the site, plus the cost of land, seeding, planting, and maintenance. Berms require a great deal of land and for that reason are often not practical. However, if used in conjunction with walls or fences they provide a compromise solution which combines the advantages of both, while alleviating the disadvantages.

It should be noted that noise barriers are often unable to provide shielding for buildings which are sited above the roadway. In such cases, distance may be the only means of reducing noise besides acoustical design and construction.



Noise barriers may not be able to shield structures on a slope overlooking a freeway.

The California State Department of Housing and Community Development has been preparing a booklet on the specifics of sound insulation. When complete, it should be of assistance to builders and building officials alike.

*Amended January 3, 1978.

EFFECTS OF STRUCTURES AND VEGETATION

Surface noise contours are drawn for a natural ground surface and do not take into account the extent that noise levels are attenuated by structures and vegetation. The problem with taking these factors into account is extremely complex. A building, for example, may intercept and reduce noise in one direction but may also reflect and augment noise in another direction.

In general terms, the order of magnitude of urban influences upon sound propagation may be illustrated by the following examples:

- Scattered individual small houses have no identifiable significant shielding effect on noise exposure levels at areas farther away from the source.
- Regularly arranged rows of individual houses, occupying 40 percent to 60 percent of the length of the row will provide about 3 dB of noise reduction for similar houses in the second row away from the source. Houses occupying 70 percent to 90 percent of the row will provide about 5 dB reduction for similar houses in the second row away from the source.
- Similar houses in third and subsequent rows will be afforded about the same degree of noise reduction up to ten decibels.
- Continuous, connecting or nearly connecting rows of buildings can act as shielding barriers reducing noise at the next row away from the source as much as 20 dB, or as little as 5 dB, depending upon the heights and configurations of the respective buildings.
- Only a broad belt of dense forestation is likely to act as an effective noise shield. A depth of about 100 feet of fully crowned trees and dense underbrush will reduce noise about 5 dB; 500 feet of comparable forestation will decrease noise about 10 dB.

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CALIFORNIA VEHICLE CODE

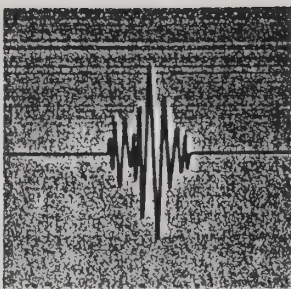
27160. Motor Vehicle Noise Limits

(a) No person shall sell or offer for sale a new motor vehicle which produces a maximum noise exceeding the following noise limit at a distance of 50 feet from the centerline of travel under test procedures established by the department:

- | | |
|---|--------|
| 1) Any motorcycle manufactured before 1970 | 92 dBA |
| 2) Any motorcycle, other than a motor-driven cycle, manufactured after 1969, and before 1973 | 88 dBA |
| 3) Any motorcycle, other than a motor-driven cycle, manufactured after 1972, and before 1975 | 86 dBA |
| 4) Any motorcycle, other than a motor-driven cycle, manufactured after 1974, and before 1978 | 80 dBA |
| 5) Any motorcycle, other than a motor-driven cycle, manufactured after 1977, and before 1988 | 75 dBA |
| 6) Any motorcycle, other than a motor-driven cycle, manufactured after 1987 | 70 dBA |
| 7) Any snowmobile manufactured after 1972 | 82 dBA |
| 8) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1967, and before 1973 . . . | 88 dBA |
| 9) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1972, and before 1975 . . . | 86 dBA |
| 10) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1974, and before 1978 . . . | 83 dBA |
| 11) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1977, and before 1988 . . . | 80 dBA |
| 12) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1987 | 70 dBA |
| 13) Any other motor vehicle manufactured after 1965, and before 1973 | 86 dBA |
| 14) Any other motor vehicle manufactured after 1972, and before 1975 | 84 dBA |
| 15) Any other motor vehicle manufactured after 1974, and before 1978 | 80 dBA |
| 16) Any other motor vehicle manufactured after 1977, and before 1988 | 75 dBA |
| 17) Any other motor vehicle manufactured after 1987 | 70 dBA |

(b) Test procedures for compliance with this section shall be established by the department, taking into consideration the test procedures of the Society of Automotive Engineers.

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May 16, 1977

Mr. Robert L. Ironside
Ironside and Associates
230 Grand Avenue
Oakland, California 94610

Subject: Corte Madera Noise Element

Dear Bob:

The following information has been prepared to describe the field surveys and methodology employed to develop the noise contours for the Corte Madera Noise Element. Also included herein is a brief discussion of tire squeal noises experienced by residents of Corte Madera Avenue.

Environmental Noise Assessment

The noise environment of Corte Madera is the result of many noise sources, including autos, trucks, busses, trains, aircraft, human noises, power tools, barking dogs, birds and numerous other contributors. Of these various sources, roadway traffic is the most dominant.

To define ambient sound levels throughout the city, field measurement data were acquired at 16 preselected locations. The field measured noise data was used in the calculation of day-night sound levels (L_{dn}) and in the development of the noise

*Amended January 3, 1978.

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contours. The 16 measurement sites were selected by the City of Corte Madera and included major noise generators, i.e., Highway 101 and major streets. Measurements were also taken at noise sensitive locations including schools and residential zones. At 2 of the locations near Highway 101, recordings were made continuously for 24 hour periods. At the remaining 14 sites, recordings were made on a 2 hour sampling basis to include representative daytime and nighttime hours.

All recordings were made with a Gen Rad Company Community Noise Analyzer which provides a direct readout of equivalent-energy (L_{eq}) and L exceedance levels. Input to the noise measurement system was provided by a calibrated microphone extended to a height of 5 feet above ground level. The total instrumentation system was acoustically calibrated before and after field tests each day.

The measurements were taken at typical setback distances of existing buildings where possible. However, at some recording sites, natural or man-made conditions made it physically impossible to have access to the desired setback distances from the noise source. For each location a calculation was performed to determine the setback distance corresponding to the nearest 5 dB contour, for example, 60 dB.

Determination of L_{dn} Exposures

The day-night level (L_{dn}) is a measure of the cumulative noise exposure over a 24 hour period on the basis of "A" weighted sound energy or sound pressure squared. A weighting factor of 5 dBA is added to the equivalent-energy level occurring during

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the nighttime period of 10:00 p.m. to 7:00 a.m. to account for the greater sensitivity of people to noise in this period.

The L_{dn} values for the field survey locations were calculated from the measured daytime and nighttime L_{eq} 's, with adjustments applied for average traffic conditions in each of the daily subperiods, in accordance with the following:

$$L_{dn} = (L_d + 10 \log_{10} 15) \rightarrow (L_n + 10 + 10 \log_{10} 9) - 10 \log_{10} 24$$

where

$L_d = L_{eq}$ for 7:00 a.m. to 10:00 p.m. (daytime, 15 hrs.)

$L_n = L_{eq}$ for 10:00 p.m. to 7:00 a.m. (nighttime, 9 hrs.)

24 = for 24 hour daily period

\rightarrow indicates decibel addition

The L_{dn} for the two survey locations along Highway 101, for example locations #7 and #8 where 24 hour recordings were taken, were each calculated at 70 dB. Also at location #9 along Tamalpais Drive, the L_{dn} was calculated at 68 dB for a 75 ft. measurement distance from the roadway centerline. Under typical traffic conditions, the noise levels diminish with distance at the rate of 4.5 dB for each doubling of the distance. To determine the setback distance corresponding to a 65 dB contour along this roadway, a distance ratio of 1.59 was calculated corresponding to the 3 dB noise reduction. Therefore, the 65 dB contour is located at a distance of 1.59 times 75 ft., or 119 ft. from the roadway centerline. A similar process of

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adjustments were made for all recording sites to develop the noise contours in 5 dB increments.

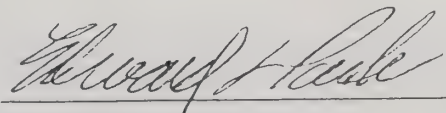
Noise Complaints

Some complaints have been received about the noise along Corte Madera Avenue originating from squealing tires. South of First Street the roadway is highly winding and is traversed by a number of sports cars travelling at fairly high speeds. The high speeds of the cars on the turns result in the tire squeal noises, which are louder than normal tire noises and in addition produce a disturbing "startle" effect. Mitigation of these disturbances can be achieved by the enforcement of appropriate speed limits for cars travelling on Corte Madera Avenue.

During the field recordings, 2 tire squeal events were noticed by the field engineer. Generally such noises do not contribute significantly to the day-night levels but do have an annoying effect on residents in a generally quiet residential area.

The above describes our field measurement program and methodology for developing the noise data. If I can be of any other assistance, please call me.

Sincerely,



Edward L. Pack
Principal Acoustical Consultant

*Amended January 3, 1978.

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The Corte Madera General Plan
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